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World News

France finds ally against Anglo-Italian defence plan

France enlisted the support of Germany in mounting a counter-offensive against the new Anglo-Italian plan to set European defence policy within the context of Nato. Page 16

Georgian street battles
Soviet Georgia's parliament met in emergency session after renewed armed street clashes between opposition and loyalist supporters turned the capital, Tbilisi, into a battlefield. Page 2

Ukraine apologises
The Ukrainian government marked the 50th anniversary of the Nazi massacre of thousands of Jews at Babi Yar by publicly apologising to the Jewish people for turning its back. Page 3

Portuguese polls hit
Voting in Portugal's general elections was disrupted in several areas as people, angry over local issues, burned ballots and dumped manure at polling stations.

Israel jails Nathan
An Israeli court jailed veteran peace campaigner Abie Nathan for 18 months for meeting Yasser Arafat in defiance of a law against contacts with the Palestine Liberation Organisation.

Japan's frontrunner
Former finance minister Kiichi Miyazawa emerged as frontrunner in the race to replace Toshiki Kaifu as prime minister of Japan. Page 6

Police killed on train
Eight policemen were killed near Amritsar when Sikh militants blew up a train used to check for rail sabotage, then gunned down survivors trying to scramble to safety.

Belgian king refuses
King Baudouin refused to accept the resignation of Belgian prime minister Wilfried Martens' centre-left coalition government. Belgian rulers split, page 4

Indonesia crash toll
Indonesia buried the 136 victims of the country's worst air disaster less than 24 hours after the military transport flying home members of a crack air force regiment crashed in a Jakarta suburb.

Haiti talks end
A team of diplomats from the Organisation of American States ended two days of tense talks with Haitian military leaders, following a military coup which ousted the country's first democratically-elected leader.

Iran executes 25
Iran executed 17 Afghans and eight Iranians in the northeastern city of Mashhad. It said they were involved in an international drug trafficking ring.

Babangida's promise
President Ibrahim Babangida reassured Nigerians that he will meet his deadline for transferring power to civilians next year.

Hamburg stays top
Hamburg is expected to remain Europe's richest city in 1995, with Paris second. London is forecast to slip from fourth to seventh place. Page 4

Suave winner
Suave Dancer won the Prix de l'Arc de Triomphe horse race at Longchamp, Paris. The French-trained colt was ridden by Cash Asmussen. Generous, the English-trained favourite, was unplaced.

Samoans shock Wales
Wales slumped to a 16-13 defeat by Western Samoa in Cardiff, the first big shock of the Rugby World Cup. In Dublin, Ireland crushed Zimbabwe 55-11.

Business Summary

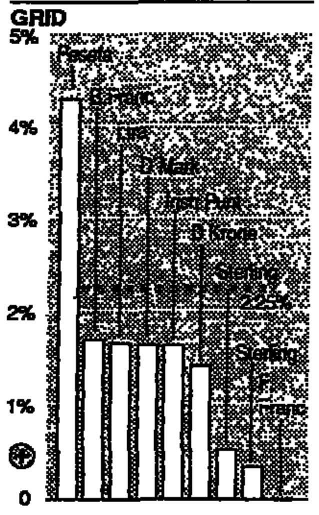
S Korea to probe leading companies on tax payments

South Korea is investigating eight of its largest conglomerates on suspicion of tax evasion, the office of national tax administration said.

The move follows the revelation last week that Hyundai Group, Korea's second-largest group, and its founder are under investigation by the tax authorities for avoidance of inheritance taxes. Page 16

EUROPEAN Monetary System: The Spanish peseta stayed at the top of the grid last week, its lead bolstered by intervention in the currency markets from the Bank of Spain. Sterling weakened on speculation that it may be about move to the narrower 2.25 per cent fluctuation band. The French franc stayed at the bottom after newspaper speculation about likely effects of opposition among the ruling Socialists.

EMS October 4, 1991



The chart shows the member currencies of the exchange rate mechanism measured against the weakest currency in the EMS's narrow 2.25 per cent fluctuation band. In practice, currencies in the EMS narrow band cannot rise more than 2.25 per cent from the weakest currency in that part of the system. Sterling and the Spanish peseta operate with 6 per cent fluctuation bands. Currencies, Page 27; Economic notebook, Page 17

CAISSE Nationale de Prévoyance (CNP), France's state-owned second biggest provider of life insurance, is to lose a 24 per cent stake to the private sector. Page 17

LONDON Futures and Options Exchange is expected to make a statement this week on the resignation of the chairman and chief executive at an emergency board meeting. Page 17

DEUTSCHE Telekom, German-based telecommunications carrier, is likely to take a 26 per cent stake in BT's US-based Syncordia venture. Page 21

GUINNESS Peat Aviation, world's biggest aircraft leasing company, based in Southern Ireland, plans to raise up to $500m (£287m) through a public bond issue in the US. Page 18

NISSAN MOTOR, Japan's second largest car maker, asked the French Finance Ministry for permission to acquire Richard Nissan, its French importer/distributor in a deal valuing the company at FFr861.3m ($151m). Page 19

HONG KONG'S stock exchange, facing compulsory reforms to align it with international standards, is to hold an extraordinary general meeting at the end of this month in a last effort to push through voluntary changes. Page 21

NORWAY is to create a dedicated group to monitor Iraq's $1.6bn worth of crude oil sales allowed under an exception to the United Nations embargo, and to ensure that all sales are undertaken in market conditions. Page 18; Production of N-weapons may be continuing, Page 6

EC threatens sanctions to stop Yugoslav fighting

By Ronald van de Krol and David Buchan in Utrecht

THE European Community has given the warring parties in Yugoslavia until midnight tonight to stop firing or face trade sanctions and possible prosecution for war crimes.

EC foreign ministers condemned Serbia and its allies for seizing control of the federal presidency, and the federal army for its "disproportionate and indiscriminate use of force". The army was "no longer a neutral and disciplined institution", they said at the end of a two-day meeting in The Netherlands.

Exasperated at the failure of more than three months of mediation, the EC asked Mr Javier Pérez de Cuéllar, United Nations secretary-general, to send a special envoy to Yugoslavia.

It also said it was considering the possibility of a total trade embargo. This would require the backing of the UN Security Council for legal and practical reasons. But the EC has already decided that it will immediately scrap its own trade and cooperation agreement with Yugoslavia if tonight's ultimatum is not met. Sixty per cent of Yugoslavia's trade is carried out with the Community. Any renewal of formal trade links by the EC will only be with those republics "which are contributing to the peace process." This would put the Community well on the road to recognising the independence of individual Yugoslav republics.

Mr Hans van den Broek, the Dutch foreign minister, said: "We are reaching the limits of what we can do with the instruments at hand."

The ministers were determined that "those responsible for the unprecedented violence in Yugoslavia, with its ever increasing loss of life, should be held accountable under international law for their actions."

The Croatian government said it would welcome any sanctions imposed by the European Community, but it warned they would be too little too late unless accompanied by stronger measures.

EC threatens trade embargo ....Page 3
Croatia 'officially at war with army' ....Page 3

Mr Mario Nobilo, a senior adviser to Mr Franjo Tudjman, the president of Croatia, said the international community must "send the US Sixth Fleet to the Adriatic, and it must close Yugoslavia's air space".

He was speaking hours after Mr Tudjman called for a general mobilisation of the Croatian population in response to an unremitting weekend of air-raids and bombings by the federal army.

Yesterday federal army units fanned across the south and eastern parts of Croatia, whose government today will draw up constitutional changes aimed at cementing its June 25 declaration of independence following the lapsing of a three-month moratorium.

The republic was engulfed in heavy fighting yesterday.

General Andrija Raseta, deputy commander of the army's Fifth Military District, which includes Zagreb, said no cease-fire was possible until the Croatian government lifted its blockade against federal army barracks throughout the republic. But Mr Nobilo said the blockade would not be lifted until the army stopped the bombings and mortar attacks.

Tanjug, the Belgrade news agency, said the federal army had captured Cilipi airport, near Dubrovnik. The medieval city is now cut off from the rest of Croatia.

Tanjug added that large numbers of Croatian fighters and police had been captured by the federal army. It also reported that army and Serb paramilitary units had entered the centre of Vukovar, in eastern Croatia, which had been under siege for several weeks. Croatian radio said federal army fighters had yesterday bombed the city four times, and 120 people had been injured over the past three days.

Point made: Hans Dietrich Genscher and Jaques Delors yesterday

Delors defends blocking of de Havilland takeover

By David Buchan in Utrecht

THE president of the EC Commission, Mr Jacques Delors, yesterday reacted furiously to attacks by French politicians against himself and the European Commission for last week blocking a Franco-Italian takeover of the Canadian aircraft company, de Havilland.

Mr Delors said he regarded these attacks – chiefly from opposition politicians in France, but also from within his own Socialist party – "with contempt".

He said the personal offensive against him had been mounted because he was running high in French opinion polls, but they also revealed France's "schizophrenic attitude" towards EC institutions.

To Mr Delors' unconcealed anger, Mr Roland Dumas, France's foreign minister, complained to his EC counterparts at a weekend meeting here yesterday that the Commission's decision to block the takeover by Aérospatiale of France and Alenia of Italy conformed "neither to the letter nor the spirit" of the 1990 regulation under which the Commission was given the power to vet all EC-scale mergers.

Mr Dumas said EC competition policy should be "to strengthen, not hinder, the competitiveness of European industry".

His complaint was echoed by Mr Guiseppe Vitalone, Italy's deputy foreign minister, while Mr Pierre Bérégovoy, the French finance minister, said in a radio interview yesterday that the Commission was acting outside its jurisdiction and needed to be brought into line.

Aérospatiale officials will today meet Commission officials in an effort to meet Brussels' objections that, with de Havilland, Aérospatiale-Alenia would have a near-monopoly of the EC market for small, turbo-prop commuter aircraft.

Mr Delors said he was ready to discuss the problems of the EC aerospace sector. But, if France wanted to challenge the legality of the Commission's action – under a regulation which Mr Delors noted was passed under France's 1989 EC presidency – its only recourse was to the European Court of Justice.

Mr Dumas indicated that the state-controlled Aérospatiale might amend its proposed takeover of de Havilland, which has Canadian government backing. But Sir Leon Brittan, the EC competition commissioner, who has been accused in the French press of favouring British Aerospace's interests in the case, proposed blocking the merger after deciding that de Havilland's product range was so narrow that no possible divestiture could make the takeover acceptable.

Continued on page 16

West welcomes proposals for Soviet N-arms cuts

By Lionel Barber in Washington, **Leyla Boulton** in Moscow, **Ivo Dawnay** in London, **William Dawkins** in Paris

THE WEST yesterday warmly welcomed President Mikhail Gorbachev's proposals for sweeping nuclear arms cuts but remained cautious about his ability to deliver them given the rapid disintegration of the Soviet Union.

Mr Gorbachev made his long-awaited response to President George Bush's unilateral disarmament initiative of last month in a television broadcast on Saturday night.

He announced the abolition of short-range tactical weapons, matching Washington's move, and withdrew Moscow's opposition to an anti-missile defence system. He also pledged to scrap 1,000 heavy strategic rocket warheads beyond cuts already agreed.

President Bush said Mr Gorbachev's proposals were "good news for the whole world", while Nato described them as "a step in the right direction for a more secure and stable world".

Mr John Major, British prime minister, said the Soviet announcement was "a turning point in the peace process", but firmly ruled out axing the Trident nuclear submarine force, currently under construction.

France said it would wait until the Soviet Union and the US had reduced the gap between their nuclear arsenals and the 400 French nuclear warheads before considering cuts of its own.

In Germany, – Chancellor Helmut Kohl referred to instability in the Soviet Union, but welcomed the Kremlin leader's promise to pull back a range of nuclear weapons from active units and store them under central control.

Mr Gorbachev's offer to eliminate or withdraw all land- and sea-based short-range nuclear weapons, plus his pledge to cut 700,000 from the 3.7m-strong armed forces, has further removed political obstacles to US aid to the Soviet Union.

Mr Bush was cautious about Mr Gorbachev's call for an arms control summit until a first round of talks at expert level is completed. A US arms control delegation led by Mr Reginald Bartholemew, under-secretary of state, is in Moscow this week.

Mr Gorbachev's pledge to eliminate tactical nuclear weapons is viewed as the most important. The US remains concerned about the fate of these weapons as the break-up of the Soviet Union continues. These tactical nuclear weapons, numbering about 15,000, are the most susceptible to theft, or to appropriation by breakaway republics.

Objections from the Ukraine to President Gorbachev's proposals on the grounds that the republic was not fully consulted underline Washington's concerns.

Soviet proposals, Page 2

Bush willing to look again at package of budget deficit cuts

By Lionel Barber in Washington

THE BUSH administration, under mounting congressional pressure to cut defence spending and stimulate the flagging US economy, signalled yesterday that it was willing to renegotiate parts of the five-year federal budget deficit reduction package.

Mr Richard Darman, President Bush's budget director, said the administration would consider opening talks with Congress – on condition that a new budget deal promoted economic growth and diverted savings from the defence budget to reduce the federal deficit, expected to be $350bn next year.

Mr Darman's comments mark a shift in administration thinking, since many senior officials had hoped that the five-year $500bn budget pact reached with Congress last year would remain intact until after the presidential election in November 1992.

However, amid high-level concern about the slow growth of the US economy damaging Mr Bush's re-election prospects, senior policy-makers have been casting around for tactics beyond interest rate cuts to restore consumer confidence and accelerate growth. Some officials favour a capital gains tax cut – even though this risks a bruising fight with Congress.

Mr Bush is due to meet US business leaders today to discuss the economy, and plans to hold talks with his top economic advisers tomorrow, the second meeting of the Economic Policy Council in as many weeks.

One of the chief obstacles to an "economic growth package" is the budget pact, which

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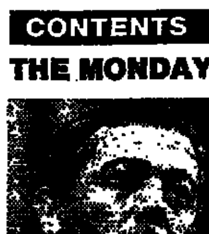
THE MONDAY INTERVIEW



Carlos Solchaga, who becomes the first Spanish finance minister to chair the International Monetary Fund's interim Committee when it meets this week in Bangkok, has become the figure around which much of Spain's political debate revolves. Page 32

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FT SURVEYS THIS WEEK

World Telecommunications: Homing in on the global market.
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TODAY:
World Telecommunications: Stirrings of competition in an entrepreneurial backwater.
TOMORROW:
Office Systems and Technology: Still scope for large productivity gain.
Diesel Technology: Ever-tightening standards of exhaust emission to be met.
WEDNESDAY:
Austria: Back at the centre of European events again.
THURSDAY:
Taiwan: A new realism enters relations with China.

INTERNATIONAL NEWS

Leyla Boulton and **Chrystia Freeland** look at the Soviet proposals to match US plans for reducing nuclear arsenals

Arms cuts give Gorbachev chance to reassert leadership

THERE was nothing really unexpected about the fact that President Mikhail Gorbachev, who professes the goal of a nuclear-free world, has more than matched the US administration's proposals to cut nuclear arsenals. But what is crucial for him is how fast he can achieve results.

He is anxious to seize the initiative while he can still play the leading role in Soviet nuclear decision-making, in the face of growing ambitions by the republics to share the burden.

"Gorbachev is now in an emergency zone and wants to send a signal to the republics that he is still in charge of this area even though I guess there are lots of consultations going on," says Mr Andrei Kortunov of the Institute for USA and Canada Studies in Moscow.

While some of the measures announced on Saturday can take effect immediately, such as the matching of the US plan to eliminate short-range land-based missiles and artillery shells, other proposed measures require negotiations with the US.

Mr Gorbachev is consulting closely with Mr Boris Yeltsin, the Russian president, who has apparently been happy to let Mr Gorbachev do the talking since he has greater authority in such matters.

But demands by Ukraine and Kazakhstan to be consulted show just how seriously these republics take their nuclear arsenals as a symbol of political statehood. As the three republics which host strategic nuclear weapons, Russia, Kazakhstan, and Ukraine are the only ones concerned by Mr Gorbachev's call for additional 50 per cent cuts in such weapons once the first Start treaty is ratified.

While Kazakhstan has insisted that it must have a say in any pressing of the nuclear button, the Ukrainian leader, Mr Leonid Kravchuk, has said he wants nuclear weapons on his territory dismantled after international negotiations.

Mr Dmytro Pavlychko, head of the Ukrainian parliament's foreign affairs committee, said yesterday: "I think Gorbachev is doing a good thing but I do not think that this [nuclear weapons on Ukrainian territory] is within his area of responsibility. Any agreement about nuclear disarmament must include the Ukraine."

While the Start treaty signed this summer provided for the dismantling of 130 ICBMs on Ukrainian soil, 46 more still remain, open to the kind of negotiations envisaged by Mr Kravchuk.

As for short-range weapons, which have been rendered obsolete in Europe because of the collapse of the Warsaw Pact, these are more difficult for republican authorities to get access to because the nuclear charges for them are stored separately from the delivery system.

The second argument for Mr Gorbachev to press ahead with sweeping disarmament is the need for rapid market reforms. This process received a symbolic boost at the weekend when the Soviet Union achieved associate membership of the International Monetary Fund after shunning the organisation for decades. Now that the defeat of the coup last August has killed off opposition to sweeping cuts in armaments and the conversion of the mighty defence industry to civilian uses, he is anxious to start working on a "peace dividend".

Although nobody says this will yield benefits quickly – the money saved on researching new weapon systems will help finance troop withdrawals rather than social services – conversion of defence plants is crucial to switching to a market economy and bolstering living standards in the longer term.

"For us the problem of disarmament has been of colossal significance because everybody knows that the best of industry was devoted to defence," Mr Oleg Ozhereliev, the economics adviser to President Gorbachev, said yesterday.

Japan, he said wistfully, had been helped in its economic development by the fact that its defence spending had been limited by the victorious allies after its defeat in the Second World War.

THE BUSH PROPOSALS

STRATEGIC NUCLEAR WEAPONS
Strategic nuclear B1 and B52 bombers stand down from alert, weapons returned to storage.
450 Minuteman II missiles (due for elimination under Start treaty) stand down from alert.
Rail-based launch system for Peacekeeper ICBM abandoned.
Mobile version of Midgetman small ICBM abandoned.
SRAM 2 bomber-delivered short range attack missile (and SRAM-T tactical version) abandoned.
Poseidon C3, Trident I C4 and Trident II D5 unaffected.

GROUND-LAUNCHED THEATRE NUCLEAR WEAPONS
1,300 artillery shells destroyed
850 Lance missiles destroyed

SEA-BASED TACTICAL NUCLEAR WEAPONS
Approx. 2,150 weapons withdrawn from vessels and stored.
About half will be subsequently be dismantled.
Nuclear depth strike bomb eliminated.

THE GORBACHEV RESPONSE

STRATEGIC NUCLEAR WEAPONS
Cut strategic warheads from 9,000 to 5,000 instead of 6,000 as agreed under Start treaty. On ratification of Start begin intensive talks aimed at reducing by further 50%.
Freeze all Soviet nuclear testing for one year. Suggest other nuclear powers to follow lead.
Freeze number of mobile ICBMs with multiple warheads.
Remove heavy bombers from alert and weapons returned to storage.
Work on mobile small-size ICBM halted.
Stop development of new rail-launched ICBMs. Existing rail-based systems returned to storage.

GROUND-LAUNCHED THEATRE NUCLEAR WEAPONS
All nuclear artillery ammunition and nuclear warheads for tactical missiles destroyed.

SEA-BASED TACTICAL NUCLEAR WEAPONS
Liquidation on bilateral basis of all sea-based tactical nuclear weapons.
All tactical nuclear missiles removed from surface ships and multipurpose submarines. Some to be destroyed.

IMF deal brings top advice on capitalism

THERE IS no clearer symbol of the Soviet Union's determination to move towards a market economy than its achievement of associate membership of the International Monetary Fund at the weekend.

The agreement finalised by President Mikhail Gorbachev and Mr Michel Camdessus, the IMF's managing director, means that from today the country will have access to some of the world's best advice on how capitalism works after 74 years of communist isolation.

Under the technical assistance which is the main benefit of this special association, western experts will be pouring into Moscow to help it design everything from taxation policies to a central banking system, and adjust the way it collects statistics to world practice.

Mr Camdessus spoke of a "thrilling challenge". Setting aside the public optimism, however, the IMF is desperately aware of the urgent need for reform, in order to restore some kind of financial sanity to a country which is hurtling towards hyper-inflation.

By Mr Camdessus' own estimate, inflation was 100 per cent in the year ending August 31 and is accelerating all the time, as is the growth of money supply. The Soviet Finance Ministry's latest estimate puts the budget deficit at Rbs300bn (£100bn) this year – consolidating for the first time the deficit of the union budget and that of the republics.

The IMF, with 45 years of experience, is ideally placed to help restructure the Soviet economy. But it will obtain the right to "dictate" the course of reforms and provide financial assistance only if the Soviet Union or its constituent republics gain full membership.

This will only become possible when what Mr Camdessus called the "constitutional" shape of the country becomes clear. The republics, most of which want some kind of political independence, are still divided over whether to proceed together or individually on economic reform. To provide the west with a coherent partner, the Kremlin is clearly pinning its hopes on the speedy signature of a treaty for an economic community which would enable a co-ordinated financial policy.

The Kremlin is hoping for a quick agreement on an economic community, Leyla Boulton writes

A Group of Seven meeting with Soviet representatives in Bangkok at the end of this week to discuss aid to the Soviet economy provides an incentive to conclude that agreement this week, although it is a mere framework which has to be fleshed out.

But even if the republics achieve some sort of consensus and overcome divisions within the Russian government and hesitation by the Ukraine, there will still be a battle to be won with the west.

First, the Soviet Union has to provide appropriate statistics on its wealth to become eligible for membership. These either do not exist or are still not forthcoming; the visiting IMF delegation was said to be struck by the chaos prevailing among the Moscow authorities from which the Fund will try to extract this information.

Second, the world's richest industrial nations are still divided over whether to start moving immediately towards granting the Soviet Union full membership, as Germany and France among others are demanding. The US and Japan take a more cautious stand, even though the US administration has softened considerably its opposition to the idea of full membership when the former Soviet Union is ready to join.

Peter Norman adds from London: Mr David Mulford, US Treasury undersecretary for international affairs, disclosed that the G7 talks, which will take place before the annual meetings of the IMF and World Bank, will focus on Soviet plans for economic reform, the current state of the Soviet economy and its external payments position. The G7 would be ready to discuss possible liquidity problems in connection with the Soviet Union's international payments obligations.

The meeting will be separate from next Saturday's long-planned G7 meeting, which is due to discuss the state of the industrialised economies and issues such as the international debt situation, as well as the Soviet Union's growing economic crisis. Senior officials – the G7 deputies – from the US, Japan, Germany, France, Italy, Britain and Canada met in Paris last week to prepare the Bangkok meetings. It is still unclear who will make up the Soviet delegation.

Georgian parliament meets as Tbilisi armed clashes continue

THE parliament in Soviet Georgia met in emergency session at the weekend after renewed armed clashes between opposition and loyalist supporters turned the capital, Tbilisi, into a battlefield, Reuter reports from Moscow.

A spokesman for the parliament said opposition deputies had agreed to the session, called by President Zviad Gamsakhurdia only hours after street battles broke out near the parliament building, in which one person was killed and 81 were injured.

Mr Gamsakhurdia, an ardent Georgian nationalist elected in a landslide victory in May, and who is now denounced by the opposition minority as a dictator, said on TV that all questions were on the table. "No problems exist which cannot be resolved by peaceful means," he declared.

The session, which was delayed briefly, opened after another night of clashes pitted armed rebels against forces loyal to Mr Gamsakhurdia. Each side has blamed the other for the new upsurge of violence.

Two weeks ago the president suspended the last parliamentary session, after claiming the opposition was about to attack the parliament building. Convening a session had been a key opposition demand.

The fighting in Georgia, on the Soviet Union's southern fringes, is the most acute problem facing the 12 remaining Soviet republics, which President Mikhail Gorbachev hopes to knit into a Union of Sovereign States.

Opposition forces, which just two days ago left their stronghold at the city's TV centre, now say they have simply regrouped in other parts of the capital and have dug in for a long battle.

Baltics call for troops to pull out

By Gillian Tett in Vilnius

BALTIC leaders issued a joint statement at the weekend demanding the full and rapid withdrawal of Soviet troops from the Baltic states.

Speaking after a meeting of the United Baltic Council in Vilnius, the Latvian, Lithuanian and Estonian presidents called for Soviet troops to leave the cities of Tallinn, Riga and Vilnius by December 1. They appealed to western countries to accelerate the withdrawal by giving financial aid to build new accommodation for troops elsewhere in the Soviet Union.

Marshal Yevgeny Shaposhnikov, Soviet defence minister, has indicated in recent weeks that the withdrawal of the estimated 400,000 Soviet troops in the Baltics could not begin until 1994, after the pullout from eastern Europe, because of acute shortages of housing in the Soviet Union for the redeployed troops.

● Lithuanian President Vytautas Landsbergis left for a brief visit to Britain yesterday at the invitation of the Conservative party. He will meet Mr John Major, the prime minister, and address the Conservative party conference in Blackpool.

France looks for further cuts

By William Dawkins in Paris

FRANCE'S foreign minister, Mr Roland Dumas, said yesterday he hoped the Soviet nuclear proposals, which he welcomed, would open the way to go further, especially in the domain of strategic weapons.

France is continuing talks with the UK, the Soviet Union and the US for a conference on additional nuclear force reductions. All four powers have agreed on the principle of having a conference, after the initiative made by Paris last month. But they have not yet agreed at what level it should be held, at what date, or who is accountable for nuclear weapons policy in the Soviet Union.

France will stick to its position of waiting until both the Soviet Union and the US have reduced the gap between their own nuclear arsenals and the number of French nuclear warheads before considering cuts of its own, said a French Foreign Ministry official.

He estimated that the US and the Soviet Union would each have 5,000 nuclear warheads after the latest reductions, compared with France's 400.

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INTERNATIONAL NEWS

EC threatens Yugoslavs with trade embargo

By Ronald van de Krol in Utrecht

DRIVEN to desperation by continuing bloodshed in Yugoslavia, the European Community yesterday took the inevitable step of threatening a trade embargo and other restrictive measures against unco-operative Yugoslav republics.

The move means, in effect, that the EC is prepared to single out those parties it holds responsible for the war and to put them on notice that their future relations with the EC will depend on whether they commit themselves to peace.

At a meeting in the Netherlands, EC foreign ministers said they were considering the possibility of abrogating an existing trade and co-operation agreement with Yugoslavia and renewing it only with "those parties which are contributing to the peace process".

The Co-operation and Trade Agreement with Yugoslavia calls for a six-month waiting period before it can be rescinded. EC legal experts are to examine ways of terminating it prematurely.

At the meeting, the EC issued an ultimatum to the warring parties, telling them to implement by midnight tonight the ceasefire agreed last Friday in The Hague, or suffer the consequences. It also said that those responsible for the escalating violence should be held accountable under international law for their actions.

The weekend's violence casts a pall over Tuesday's session of the Yugoslav peace conference in The Hague, where representatives of the Serb minority in Croatia are scheduled to state their demands and seek international safeguards.

The EC noted all parties in the conflict had breached a succession of ceasefires, but apportioned special blame to the Yugoslav national army.

"Ministers are alarmed in particular at reports that the Yugoslav National Army, having resorted to a disproportionate and indiscriminate use of force, has shown itself to be no longer a neutral and disciplined institution," the EC said in a statement.

Despite the markedly firmer language, the EC has few illusions about being able to influence events decisively. "If there is no will to peace in Yugoslavia, it cannot be imposed from the outside," according to Mr Douglas Hurd, British Foreign Secretary.

The scope for swift, united action by the international community is limited. For one thing, any trade embargo would need to be based on a resolution to that effect from the United Nations. The EC, which accounts for 60 per cent of Yugoslav's foreign trade, could hardly act on its own.

At yesterday's meeting in Utrecht, Mr Hurd again raised the idea of imposing an oil embargo. This too would require international co-operation, particularly from Yugoslavia's neighbours. For example, one of the two oil pipelines supplying Serbia starts in Greece and passes through the republic of Macedonia.

Serbia's other pipeline has already been cut off by the republic of Croatia. Oil also reaches Yugoslavia by Europe's inland waterways. For an oil embargo to be effective, Hungary and Czechoslovakia would need to ensure that barges on the Danube River did not carry vital oil supplies into Yugoslavia.

Croatia 'officially at war with federal army'

By Judy Dempsey in Zagreb

CROATIA is officially at war with the federal army following the call by Mr Franjo Tudjman, the president of Croatia, for a general mobilisation of the population, Mr Branko Salaj, Croatia's minister of information, said yesterday.

"We are at war with the federal army. We cannot go back. The army will not honour the ceasefire. But we do not want this war," he said, adding that despite the mobilisation, Croatia did not have enough weapons to resist the army.

General Andrija Raseta, deputy commander of the Fifth Military District, which includes Zagreb, capital of Croatia, yesterday accused the Croatian government of breaking the ceasefire accord agreed in The Hague last Friday.

"The Croatian government is refusing to lift its blockade against our federal army barracks," he said.

"It seems that we are expected to stop the fighting even though the blockades are continuing."

In response, Mr Salaj said Croatia would not lift the blockades until the army implemented a ceasefire, confirming fears among sections of the population that if the blockades were completely lifted, the army would then regroup and launch a fresh assault against Croatia.

"It is like the lion asking you to put your head into his mouth and hope for the best. A tremendous offensive is taking place. The army is pushing on all fronts," Mr Salaj added.

Mr Tudjman, under pressure from the far-right of the ruling Croatian Democratic Union, called for mobilisation after a series of bombardments of key installations on Saturday. The town of Sisak, south of Zagreb, which accounts for 20 per cent of the republic's industrial output, and where vital oil refineries are located, was attacked.

The fertile plains in Slavonia, eastern Croatia, are now firmly under the control of Serb paramilitary units backed by the army. The medieval city of Dubrovnik is cut off from the rest of Croatia. The mobilisation, which will initially affect those trained in artillery and tank units, but which will place the entire economy on a war footing, is seen by senior Croatian officials as the republic's final stand against the federal army.

Mr Mario Nobilo, an adviser to Mr Tudjman, said yesterday: "We will now have to pursue a military offensive parallel with a diplomatic offensive until the army implements a ceasefire and withdraws from the republic." Mr Nobilo said Croatia had no choice but to mobilise the population. "The army is bombing Croatia from Dubrovnik in the west, to Vukovar in the east. We did everything to establish the ceasefire. It is in our interests for a ceasefire, because the army is stronger. But the army will not stop the fighting."

A Croatian soldier wearing a helmet painted with crosses crouches in a forest outside Zadar, a Dalmatian coast city being bombed by Serbian and Yugoslav forces

He repeated that the federal army was rapidly disintegrating. "The army's morale is very low. It has problems with calling up reservists, obtaining fuel and spare parts." But another Croat official said yesterday that the army's disintegration was not taking place fast enough to give the military advantage to the Croats.

Moreover, if the federal army is unravelling at the seams, Croat officials said the Croatian government will still have to contend with an army being rapidly transformed into a Serb army, answerable to Serbia, and one which will have few qualms about pursuing any offensive against Croatia. "General Veljko Kadijevic [the federal defence minister] has no control over the army," Mr Nobilo declared. "He is hiding behind words..."

Solchaga warns on US interest rates

MR CARLOS Solchaga, Spain's finance minister and chairman of the interim committee, the IMF's policy-making body, has warned US interest rates are falling "too far too fast", producing "terrible" inflation in the next few years, Peter Bruce reports from Madrid.

Mr Solchaga, who takes the interim committee chair for the first time next Sunday at the IMF meeting in Bangkok, said: "I am absolutely terrified about the evolution of interest rates in the US." Real short-term interest rates in the US were now about 1.5 per cent. While the fall would be "very good for the electoral prospects of President (George) Bush", their consequences could be serious.

Financing the Soviet Union and Central Europe and Gulf reconstruction would slow a cut in real interest rates in Europe. "I would tend to think that within the next few years, real interest rates are not going to be less than 5 per cent here in Europe."

If Spain could draw inflation down to 4-5 per cent, Spanish rates would fall to 9-10 per cent. It was already closing the real interest rate gap with the rest of the EC.

Monday interview, Section 2

Ukraine apologises for its part in Nazi massacre of Jews

By Chrystia Freeland in Kiev

THE Ukrainian government marked the 50th anniversary at the weekend of the massacre of thousands of Jews at Babi Yar by publicly apologising to the Jewish people.

Mr Leonid Kravchuk, the head of the Ukrainian government, accepted that his countrymen had turned their backs while Hitler's SS units massacred thousands of Jews outside Kiev half a century ago.

"Part of the blame is on us," Mr Kravchuk said at a memorial service on Saturday which was attended by Israeli, German and American delegations.

In an effort to prove that minority rights are a priority for the emerging, independent Ukraine, he said: "We are building statehood for all nationalities, living on this land," citing Russians, Jews, Belorussians, Poles and others. Israelis and Ukrainian Jews welcomed the Ukrainian government's action.

The Babi Yar massacre, which began on September 29 1941 on the outskirts of Kiev, was one of the first implementations of the Nazi "final solution" to the "Jewish problem".

A total of 200,000 Jews, Ukrainians, Russians, Poles, gypsies and political misfits were killed.

In the first days, more than 30,000 Jews were marched through the town to a ravine where they were stripped, marshalled on to a ridge and machine-gunned. The sides of the ravine were then blasted to bury the piles of bodies of men, women and children.

In the past, the Soviet government forbade references to the Babi Yar massacre as a specifically Jewish tragedy. The Hebrew and Ukrainian language banners which draped Kiev last week signalled a new political line.

Many Ukrainian Jews, who now number almost 500,000, took advantage of the change and yesterday walked past the official monument – whose most prominent figure is a communist partisan – to lay flowers in honour of buried relatives at a new, specifically Jewish sculpture built this year.

The Ukrainian government has also made political gestures towards a rapprochement with the Jewish community.

Last week at the United Nations in New York Mr Kravchuk said Ukrainian delegations at the UN would support a US-led move to overturn a decision that Zionism equals racism. The Ukraine has also indicated that it would like to open diplomatic relations with Israel.

But the commemoration has also underscored how separate the Ukrainian and Jewish communities still remain. Although Jews have lived in the Ukraine for nearly a millennium and the region was once the centre of a thriving Jewish community, Ukrainians and Jews have always lived apart.

Though Jews praise the pro-minority stance of the Ukrainian national movement, many of them still plan to emigrate.

German phone monopoly 'will only last 4-5 years'

By David Goodhart in Bonn

GERMANY's public-sector monopoly of phone services will last only "another four or five years" at most, a senior member of the board of Deutsche Telekom, Germany's publicly-owned telephone system, has said.

Mr Gerd Tenzer, one of Telekom's leading strategists, said in Bonn that technological and political pressure, the latter coming especially from the European Commission, meant the monopoly would soon be a thing of the past.

After the Bundespost liberalisation of 1989, most telecommunications services were opened to competition except the basic phone service. Since then, two exceptions have been made. First, to facilitate east-west German business links, Telekom has suspended its voice monopoly to allow private consortia to provide satellite phone links. This exception is expensive and lasts only a limited time. Partly for those reasons, it has attracted only 15 consortia to date.

Second, a private-sector digital mobile phone consortia, headed by Mannesmann, is being allowed to compete with Telekom's own digital system. At the end of last month, Mannesmann won a victory on the price it will have to pay Telekom for its use of leased lines and the main phone network, both vital for its own mobile system.

The Telekom Infrastructure Council, made up mainly of politicians, agreed to implement the proposals of Mr Christian Schwarz-Schilling, post minister, to reduce their leased line charges by 54 per cent and normal line charges by 21 per cent.

Telekom says the decision will cost about DM200m (£68.7m) a year, money it cannot afford, given the investment demands in east Germany and the DM6bn-DM8bn it has to hand over to the Government each year. Other companies will be hoping to benefit from Mannesmann's breakthrough on Germany's relatively expensive leased lines.

See special telecom survey

Canada vows to fight US timber duty

By Bernard Simon in Toronto

CANADA intends to fight a US plan to impose a countervailing duty on softwood lumber imports by asking for a special panel of the General Agreement on Tariffs and Trade to be formed immediately.

Mr Michael Wilson, industry minister, said Ottawa would also invoke the dispute settlement mechanism of the US-Canada free trade agreement to review the results of the lumber investigation which was announced by Mr Robert Mosbacher, the US commerce secretary, last Friday.

The US is requiring US buyers to post a 15 per cent bond on imports from some Canadian provinces in retaliation against Ottawa's unilateral decision last month to revoke a 15 per cent export tax.

The tax was imposed in 1986 to forestall a US countervailing duty which was designed to neutralise the low stumpage (cutting) fees paid by Canadian companies in provincially owned forests.

The Canadians contend that present circumstances do not justify the tax. British Columbia, where more than 60 per cent of Canada's softwood lumber is produced, has raised its stumpage fees to a level where companies have no longer paid the export tax. In addition, a strong Canadian dollar has made Canadian products less competitive in the US.

Washington has exempted imports from British Columbia as well as the Atlantic provinces from the bond requirement. A lower payment of 6.2 per cent will apply to imports from Quebec, which has started to increase stumpage charges.

The action appears designed to put pressure on other timber-producing provinces, notably Ontario and Alberta, to follow BC's lead in raising stumpage fees.

Mr Wilson said Canada would ask the Gatt panel to confirm that the present stumpage system does not represent a subsidy. Canada exported C$3.3bn (£1.7bn) worth of softwood lumber to the US last year, giving it a 26 per cent share of the market there.

Sweden's new PM hoists his free market colours

Carl Bildt faces a long haul, but he has been quick to get off the mark, writes Robert Taylor in Stockholm

IT IS not hard to understand why Mr Carl Bildt, Sweden's new 42-year-old non-Socialist prime minister, is a man in a hurry. In a country dominated by social democratic values for nearly 60 years, his four-party coalition has little time to bring about any decisive change of direction.

Mr Bildt has until 1994 to fulfil his plan to transform the country into a dynamic free market economy. But as he pointed out on Friday in his inaugural address to parliament, his political and economic programme is an agenda for the 1990s not just for the next three years.

He has set himself two formidable tasks. He must make an early impact in signalling to the outside world, as well as Sweden itself, that social democratic domination is over. But he also needs to prepare for the longer haul without a stable parliamentary majority. Another mandate in 1994 is crucial to the Bildt experiment.

In his unsentimental way, Mr Bildt is setting a new tone in Swedish politics. Gone is the familiar rhetoric about solidarity, equality and collectivism in what became known as the Social Democratic People's Home. Instead, here is a Swedish prime minister enthusing without guilt about the profit motive, private enterprise and competition.

Mr Bildt intends to prepare the country over the next three years for membership of the European Community by trying to make its economy more competitive and productive. In this objective he is single-minded. But what was impressive about his debut on Friday was the way in which he was able to stitch together a programme that embraced the priorities of all the coalition partners, and not just his own Moderates, without it seeming like a disconnected shopping list.

Environmental issues are a priority, to the delight of the potentially awkward Centre party, whose leader, Mr Olof Johansson, takes on the environment portfolio. The softer-hearted Liberals are pleased that their leader, Mr Bengt Westerberg, heads the big social welfare department, while Mr Alf Svensson of the Christian Democrats has been put in charge of Sweden's aid programme.

Mr Bildt's skill so far is illustrated further by his success in winning the bipartisan support of the opposition Social Democrats for the EC negotiations, particularly by appointing as minister for Europe Mr Ulf Dinkenspiel, a respected diplomat who served the outgoing government as a negotiator with the EC.

But the new premier's self-confidence belies the fragility of his parliamentary position and the fact that time is not on his side. His government lacks a majority in parliament and the four disparate parties in the coalition are united mainly by their opposition to social democracy.

This is why the prime minister and his senior colleagues are keen to set a fast pace in their early days in office. They want to show the doubters that this is not a minimalist government held together by a limited common denominator which will provide an uneasy interlude between social democratic governments. Mr Bildt played a junior role in the failed non-Socialist coalitions between 1976 and 1982 and he is determined there will be no repetition of their lack-lustre defeatism in office.

The 'good morning' feeling in Sweden of last weekend is unlikely to last very long, but there may be a stronger will to succeed among the non-Socialist parties than there was 15 years ago.

To a large extent, the success or failure of Mr Bildt's free market experiment will depend on forces outside his direct control. The internationalisation of the Swedish economy means that what happens will depend on a world economic recovery. Mr Bildt could be lucky. The Swedish economy is bottoming out although unemployment is rising. The economy looks set to improve slowly next year and more strongly in 1993. By then, his government will only have itself to blame if it fails to succeed.

Belgian rulers split along old linguistic lines

By Andrew Hill in Brussels

Martens: lost majority

TREACHERY and triumphalism, blackmail and arrogance: when Belgian governments disintegrate, they do so in spectacular style. The collapse on Friday of Belgium's five-day-old, centre-left coalition along the old linguistic fault-lines triggered a barrage of accusations and counter-accusations by Flemish and French-speaking politicians.

Perhaps in part to allow tempers to cool, the king was this weekend still considering whether to ask prime minister Mr Wilfried Martens to form another government. It would be Mr Martens' 10th administration in 12 years, and would most likely guide the nation to an early general election, with a minimal programme of legislation.

But the acrimony of last week's breakdown of consensus between Flemings and French-speaking Walloons has cast doubt on the third phase of Mr Martens' gradual programme of constitutional reform, which would devolve more power to Flanders and Wallonia.

Mr Martens has already lost the two-thirds parliamentary majority necessary to push through such reforms. More important, in defence of the economic interests of their different regions, Flemish and francophone politicians now seem to be pushing towards a more radical federalism for the country.

In round one of the tit-for-tat struggle, 10 days ago, Flemish ministers wanted, for pacifist reasons, to block arms exports to friendly Gulf states, a move which would have struck at the ailing and predominantly Walloon arms industry. In retaliation, the francophones threatened to hold up a lucrative contract for the state telecommunications group which would have benefited Flemish suppliers. The cabinet thrashed out a compromise – French-speaking and Flemish ministers would sign arms export licences for their own companies – but lost one Flemish coalition partner.

In round two, on Friday, the French-speakers blocked the telecommunications contract, insisting that cabinet approve a fast-track law which would allow Wallonia to collect the revenue from radio and television licences. The region badly needs the cash to fulfil financial promises to its teachers. But the Flemish, stung by what they saw as Walloon triumphalism over the arms export victory, held out. Without cabinet approval, the Flemish telecommunications minister went ahead and signed only those telephone contracts which would benefit Flemish companies. The government collapsed.

The squabbling over contracts conceals a deeper desire, at least on the part of the Flemish, for even greater autonomy, for instance over social security. Flemish politicians say a national levy of social security makes prosperous Flanders pay for the ills of the more depressed Walloon region.

This is an awkward moment for a crisis. Belgian troops are still in Zaire trying to keep the peace, and December's vital Maastricht summit of EC leaders is approaching fast. There is a risk that Mr Martens, the Community's longest-serving prime minister, might not be there. Rapid dissolution of the Belgian parliament could mean general elections as early as November 17. On last week's evidence, the campaign could be fierce.

Dose of 'reality' prescribed for Brazil

By Christina Lamb in Rio de Janeiro

BRAZIL'S President Fernando Collor today presents to congress the final version of a sweeping constitutional change which he says is the only solution to the country's worsening economic crisis.

In a broadcast to the nation on Saturday night, Mr Collor ruled out further economic shock plans to bring inflation down from a predicted 21 per cent a month for October. Pointing out that the previous five plans had all failed (including two of his own), he said: "There is no more place for economic shocks in Brazil. . . . the only shock which will resolve things is a shock of reality."

This he said was the reasoning behind the amendment, which would enable the government to carry out a fiscal adjustment to reduce the public deficit to zero by 1993.

The amendment, which involves eight changes to the 1988 constitution, is far less ambitious than Mr Collor's original version, which called for 44 changes. However, the main objective of increasing federal revenues and cutting expenditure remains.

To raise money the amendment includes a far-reaching tax reform, a reduction of banking secrecy to facilitate a clampdown on evaders, a new fuel tax and a cut in the amount of money passed on to the municipalities. It also increases from five to 10 years the period of service state employees must work to gain lifetime job security.

To make the country more attractive to investment the amendment includes a change in the definition of a "national company" to end discrimination against foreign companies. Even more radically, it calls for an end to the state monopoly on petroleum and telecommunications.

Some version of the amendment is thought necessary if Brazil is to obtain a loan from the International Monetary Fund, which is asking for evidence of fiscal reform. But it seems unlikely that Mr Collor will obtain the required three-fifths majority in two votes in congress, where he has only a handful of party members.

In the meantime, a further economic shock may be unavoidable. Last week prices rose 17.9 per cent in just six days – the highest increase since Mr Collor took office 19 months ago.

Hamburg forecast to stay top of EC league

By Edward Balls

THE FASTEST growing regions in the European Community over the next five years will be in the east and south. Traditional regional divides in the UK, France and Italy will become further entrenched.

These are some of the conclusions of a report* published today by Cambridge Econometrics, the UK-based consultancy.

Hamburg is expected to remain the richest city in Europe in 1995. Only Brussels will have a higher annual average growth rate of gross domestic product per head between 1989 and 1995, it says.

London is seen as slipping from fourth to seventh place in the league table of richest European cities. Paris should retain second place, reflecting the growing concentration of economic activity there.

Regional performance will be heavily dependent on national economic factors, although their importance should fall as cross-border trade develops.

The distribution of regional growth rates is expected to be most even in those counties with above average growth rate of GDP per head, such as Germany and Spain.

The eastern regions within the old west Germany are expected to benefit from increased trade as a result of the democratisation and restructuring of eastern Europe.

All regions in Spain are expected to have growth rates of GDP per head above 2.6 per cent a year between 1989 and 1995. Most will have growth rates above 3.6 per cent.

France and the UK, by contrast, are likely to have below average rates. Annual growth rates are expected to remain below 2.5 per cent in all UK regions except Greater London.

The fastest growing region in France will be the Ile de France, which includes Paris.

"European Regional Prospects" is available from Cambridge Econometrics, 21 St Andrew's Street, Cambridge CB2 3AX, UK. Price Ecu2,000 (£1,400).

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Baghdad 'may still be developing N-weapons'

By Our Middle East Staff

IRAQ may be continuing work on a nuclear weapons programme, even as United Nations teams probe the country's suspected nuclear facilities, a senior UN investigator said yesterday.

Mr Rolf Ekeus, head of the UN special commission on Iraq's weapons of mass destruction, left Baghdad yesterday after two days of talks and said Iraq had a "full-fledged [arms] programme", of which parts "are still going on".

"As a result of our inspections in the nuclear area we are convinced that Iraq has had and also, we believe, may continue to have a nuclear weapons development programme," he said.

A group of 50 UN chemical weapons investigators – the biggest single UN team in Iraq since the Gulf war ceasefire – arrived yesterday for a 30-day visit, joining a group of UN ballistics investigators already in the country.

Mr Marius Van Zelm, head of the latest inspection team, said it was seeking to identify the kind of chemical armaments Iraq had or was developing before considering their destruction. His team will take an inventory of the Muthana facility, where Iraq has stored 10,000 chemical bombs.

Earlier, UN inspectors pressed Iraq into declaring 10 more chemical weapons sites and discovered three undeclared sites, showing Iraq's stock was more than double the previously reported size.

UN ballistics experts said they had discovered undeclared Scud missile launch sites during helicopter surveillance. The team had destroyed 62 Scud missiles and was "well on its way to destroying 40 to 50 missile sites", according to Mr Douglas Eglund, its head.

French minister pledges improved ties with Iran

FRANCE, whose relations with Tehran have been clouded by the murder of Mr Shapour Bakhtiar, the former Iranian prime minister, in Paris, said yesterday it wanted better ties between the two countries, Iranian radio reported, Reuter reports from Nicosia.

It quoted Mr Alain Vivien, France's minister for foreign affairs, as saying: "The French government believes that relations between the two countries have reached a very good level and that they must now be enhanced at a greater speed."

The radio, monitored by the BBC, said Mr Vivien was speaking after meeting Mr Ali Akbar Velayati, Iranian foreign minister. There was no mention of the murder being discussed.

Mr Bakhtiar, the Shah's last prime minister, was stabbed to death in August at his heavily guarded home in a Paris suburb.

French justice officials claim one of three suspects in their custody had alleged senior Iranian figures had ordered the killing. Iran has denied involvement.

Iran's official news agency quoted Mr Vivien as saying France was ready to expand economic relations with Iran and play an active role in the implementation of big infrastructure projects in its five-year development plan.

Babangida reassures on elections

PRESIDENT Ibrahim Babangida has reassured Nigerians, worried his administration might delay plans to transfer power to a civilian government, that he intends to keep to next year's handover date, state radio said, Reuter reports from Lagos.

General Babangida – who seized power in a 1985 coup – is carrying out a phased transition to civilian rule by October 1992.

But there has been growing concern that the military might delay the plan after reports of political unrest and crises in the two parties that it created to contest the elections.

Japanese factions jostle for poll position

The intra-party race to pick Kaifu's replacement has begun, writes Stefan Wagstyl

JAPAN'S ruling Liberal Democratic party has been thrown into a frenzy by prime minister Toshiki Kaifu's surprise decision last week not to seek re-election when his term expires this month.

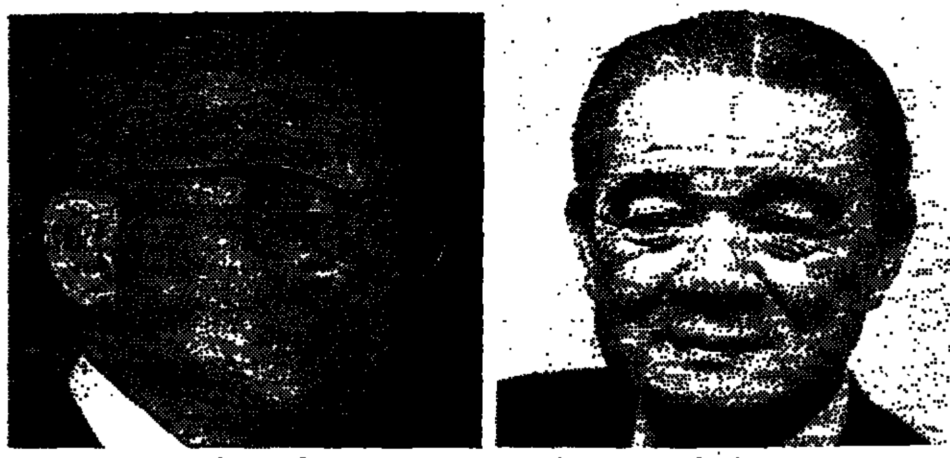
Party leaders launched into a breathless round of public speeches and press conferences at the weekend. But the real work of choosing a new party president and prime minister was being conducted in private in the confines of party bosses' homes and offices.

Despite much talk about taking into account the wishes of the people and pledges to make politics more transparent following the Recruit bribery scandal two years ago, Japan's next prime minister will be selected in the same way as most of his predecessors – by the word of the LDP's barons.

Certainly, the party plans to hold an election for the party presidency – on October 27. All 394 LDP Diet members will be entitled to vote, along with an electoral college of 101 delegates chosen by the LDP rank-and-file. But the voting will be determined almost entirely by the will of the chiefs of the intra-party factions.

The early favourite is Mr Kiichi Miyazawa, a faction leader and former finance minister. But his success is far from certain: a week ago it was Mr Kaifu who was in the lead.

Party bosses proved their power in last week's humiliation of Mr Kaifu. He was installed in office at the height of the Recruit scandal by the party's largest faction – headed by Mr Noboru Takeshita, the former prime minister, and Mr Shin Kanemaru, a former deputy premier.



Noboru Takeshita (left) and Shin Kanemaru: head largest LDP faction

The prime minister was charged with restoring the LDP's reputation and, to a large extent, he succeeded, helping to raise the party's standing in the opinion polls from record lows of less than 20 per cent to record highs exceeding 60 per cent.

But this popular support counted for nothing last week when Mr Kaifu challenged Mr Takeshita and Mr Kanemaru over political reform. He wanted to secure the party's commitment to reform; they refused to give it, dumped him and started looking for a new candidate prime minister.

So far three former ministers have declared themselves in the race – Mr Miyazawa, Mr Michio Watanabe and Mr Hiroshi Mitsuzuka. All are faction leaders, but none of the factions is large enough to secure victory on its own. The key lies with Mr Takeshita and Mr Kanemaru, who have the most power with 106 faction members, against Mr Mitsuzuka's 89, Mr Miyazawa's 82 and Mr Watanabe's 70.

The Takeshita/Kanemaru faction is naturally considering nominating its own candidate. The two men were last night trying to persuade Mr Ichiro Ozawa, a former LDP secretary-general and one of the faction's rising stars, to stand.

But Mr Ozawa, 49, was taken to hospital with heart trouble earlier this year. He believes he can afford to wait for his health to improve before becoming prime minister.

Mr Ozawa's great rival in the faction is Mr Ryutaro Hashimoto, the finance minister, who makes no secret of his prime ministerial ambitions. But he cannot stand as he is resigning from his current post to take responsibility for recent financial scandals.

The faction has other potential candidates, but promoting them above the heads of Mr Ozawa and Mr Hashimoto might cause dissent.

In extremis, Mr Takeshita might put himself forward. However, his reputation was hurt by his involvement in the Recruit affair and by his support two years ago for a consumption tax bill, the most hated piece of government legislation for many years. During Mr Kaifu's term, Mr Takeshita has learnt to love ruling from behind the scenes.

So if Messrs Takeshita and Kanemaru do not put up their own candidate, whom will they support?

The logical choice might seem to be Mr Mitsuzuka; as his is the second largest faction, the new government would have solid support. Mr Mitsuzuka, 64, has served as minister for international trade and industry and has a reputation for sound judgment, promising foreign trade negotiators only what he could deliver.

But he is weaker than he seems – he inherited his faction only this summer on the death of Mr Shintaro Abe, the former foreign minister, and has yet to stamp his authority on dissidents in his ranks.

That leaves Mr Miyazawa and Mr Watanabe. Of the two, Mr Miyazawa, 72, is better placed as his faction is larger and he is older than his rivals. Respect for age counts in Japan, even in the cynical recesses of the LDP.

Mr Miyazawa, a graduate of the élite Tokyo University and a former Finance Ministry official, is a fluent English-speaker and an acknowledged expert on international affairs. But some MPs see him as an intellectual snob.

Mr Watanabe, 68, is the opposite: before going into politics he worked as a street trader. Commenting on political ethics, he once said that if people wanted clean politicians they should vote for Buddhist monks.

As agriculture minister he loudly defended the privileges of Japanese farmers against trade liberalisers. Although prone to gaffes – he made the mistake of saying that blacks in the US polluted white neighbourhoods – he has kept his tongue in check recently and has worked to build contacts in east Asia.

Mr Miyazawa and Mr Watanabe were both implicated in the Recruit affair but both argue they have been purged since they held their seats in a general election last year.

All three declared candidates visited Mr Kanemaru on Saturday to ask for the support of his and Mr Takeshita's faction. They will visit him many times more before this race is over.

See editorial comment

INTERNATIONAL ECONOMIC INDICATORS: PRICES AND COMPETITIVENESS

Yearly figures are shown in index form with the common base year of 1985. The real exchange rate is an index throughout; other quarterly and monthly figures show the percentage change over the corresponding period in the previous year and are positive unless otherwise stated.

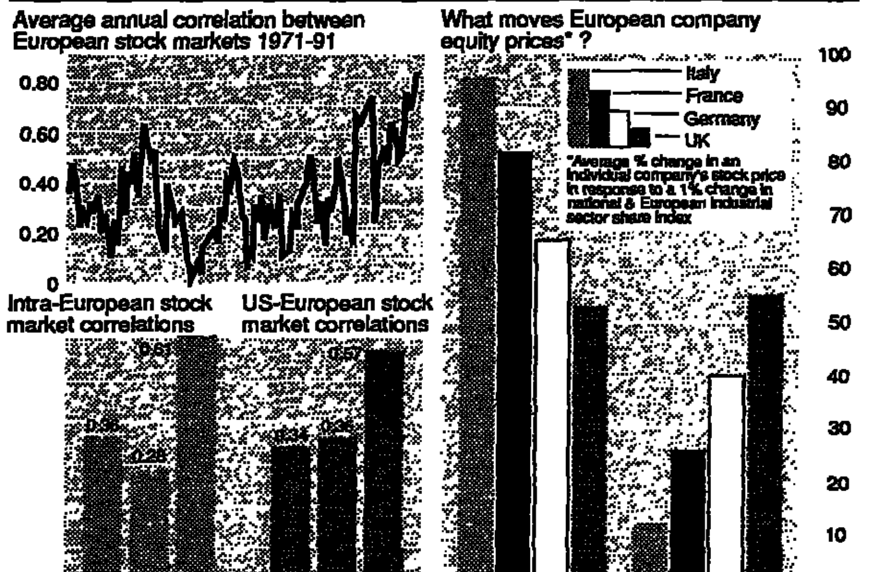
	UNITED STATES					JAPAN				
	Consumer prices	Producer prices	Earnings	Unit labour costs	Real exchange rate	Consumer prices	Producer prices	Earnings	Unit labour costs	Real exchange rate
1984	96.6	99.1	96.0	98.4	97.1	97.9	100.6	97.0	100.0	100.1
1985	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1986	101.9	98.6	102.0	99.9	77.1	100.8	95.3	101.4	105.0	125.7
1987	105.6	100.7	104.0	97.5	64.7	101.2	92.5	103.1	103.0	126.9
1988	109.9	103.2	107.0	98.4	59.9	102.2	92.3	107.8	98.0	137.4
1989	115.2	108.5	110.0	99.1	63.0	105.0	94.2	114.0	98.0	131.3
1990	121.5	113.8	114.0	99.2	56.6	108.2	95.7	120.1	100.0	116.1
3rd qtr.1990	5.5	4.9	3.3	−0.5	55.8	2.8	0.7	3.4	1.4	112.3
4th qtr.1990	6.2	6.4	3.9	0.6	52.1	3.6	2.4	5.7	0.7	120.6
1st qtr.1991	5.3	3.5	3.6	2.3	52.7	3.6	2.6	3.6	1.3	118.0
2nd qtr.1991	4.8	3.4	2.9	2.5		3.1	2.3	4.3	3.0	
September 1990	6.2	6.0	3.8	−0.3	n.a.	2.8	1.1	4.5	2.0	n.a.
October	6.3	6.5	4.5	−1.2	n.a.	3.1	2.0	4.9	0.0	n.a.
November	6.3	7.0	3.6	0.6	n.a.	3.9	2.5	5.5	1.0	n.a.
December	6.1	5.7	3.6	2.6	n.a.	3.7	2.5	6.0	1.0	n.a.
January 1991	5.7	4.0	4.5	1.8	n.a.	3.9	2.8	1.9	0.0	n.a.
February	5.3	3.4	3.6	2.6	n.a.	3.4	2.8	5.4	1.0	n.a.
March	4.9	3.2	2.7	2.6	n.a.	3.4	2.6	4.1	3.0	n.a.
April	4.9	3.3	2.7	2.4	n.a.	3.0	2.4	4.0	3.0	n.a.
May	5.0	3.4	3.5	2.5	n.a.	3.0	2.4	4.0	2.0	n.a.
June	4.7	3.5	2.6	2.7	n.a.	3.3	2.2	4.6	4.0	n.a.
July	4.4	2.9	3.5	2.6	n.a.	3.4	2.0	2.3		n.a.
August	3.8	2.0			n.a.	3.5				n.a.

	GERMANY					FRANCE				
	Consumer prices	Producer prices	Earnings	Unit labour costs	Real exchange rate	Consumer prices	Producer prices	Earnings	Unit labour costs	Real exchange rate
1984	97.9	97.6	96.0	100.0	98.7	94.5	95.8	94.4	95.5	114.1
1985	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1986	99.9	97.5	104.0	104.0	111.3	102.5	97.2	104.5	101.5	101.9
1987	100.1	95.1	108.0	107.0	126.0	105.9	97.8	107.8	103.8	102.1
1988	101.4	96.2	113.0	107.0	128.2	108.8	102.8	111.1	104.3	99.3
1989	104.2	99.3	117.0	108.0	122.6	112.6	108.4	115.4	106.5	95.8
1990	107.0	101.0	124.0	111.0	126.8	116.4	107.1	120.6		100.6
3rd qtr.1990	2.7	1.8	n.a.	1.9	124.8	3.4	−1.4	n.a.		100.3
4th qtr.1990	3.0	1.8	n.a.	3.1	124.6	3.6	0.7	n.a.		102.7
1st qtr.1991	2.7	2.1	n.a.	2.4	124.2	3.4	0.7	n.a.		101.3
2nd qtr.1991	3.1	2.2	n.a.	3.0		3.2	−0.6	n.a.		
September 1990	3.0	2.1	–	1.8	n.a.	3.8	n.a.	–	n.a.	n.a.
October	3.3	2.0	5.9	1.9	n.a.	3.9	n.a.	4.6	n.a.	n.a.
November	3.0	1.8	–	3.7	n.a.	3.6	n.a.	–	n.a.	n.a.
December	2.8	1.5	–	3.7	n.a.	3.4	n.a.	–	n.a.	n.a.
January 1991	2.8	2.3	6.7	1.8	n.a.	3.5	n.a.	4.6	n.a.	n.a.
February	2.7	2.2	–	2.7	n.a.	3.5	n.a.	–	n.a.	n.a.
March	2.5	1.8	–	2.8	n.a.	3.2	n.a.	–	n.a.	n.a.
April	2.8	2.2	3.2	0.9	n.a.	3.2	n.a.		n.a.	n.a.
May	3.0	2.2	–	4.4	n.a.	3.2	n.a.		n.a.	n.a.
June	3.5	2.3	–	3.6	n.a.	3.3	n.a.		n.a.	n.a.
July	4.4	3.3			n.a.	3.4	n.a.		n.a.	n.a.
August	4.1	2.7			n.a.	3.0	n.a.		n.a.	n.a.

	ITALY					UNITED KINGDOM				
	Consumer prices	Producer prices	Earnings	Unit labour costs	Real exchange rate	Consumer prices	Producer prices	Earnings	Unit labour costs	Real exchange rate
1984	92.1	92.8	89.9	91.8	98.7	94.3	95.0	91.7	94.3	97.5
1985	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1986	106.1	100.2	104.8	102.6	101.4	103.4	104.3	107.7	104.5	92.9
1987	111.0	103.2	111.6	105.6	102.5	107.7	108.3	116.3	105.9	90.6
1988	116.5	106.8	118.4	109.7	101.9	113.0	113.2	126.2	108.9	96.6
1989	124.2	113.1	125.6	112.2	109.2	121.8	119.0	137.2	113.5	95.0
1990	131.8	117.8	134.7		117.1	133.3	126.0	150.1	123.7	98.3
3rd qtr.1990	6.1	4.1	7.3		116.1	10.4	6.0	9.7	9.2	102.8
4th qtr.1990	6.3	3.9	7.2		119.5	10.0	5.9	9.6	11.2	105.2
1st qtr.1991	6.6	4.2	7.9		118.4	8.7	6.3	8.9	10.9	107.1
2nd qtr.1991	6.8					6.0	6.0	8.5	10.8	
1990 September	6.3	4.5	7.2	n.a.	n.a.	10.9	5.8	9.8	9.8	n.a.
October	6.2	4.2	7.2	n.a.	n.a.	10.9	5.9	9.2	10.2	n.a.
November	6.5	4.0	7.4	n.a.	n.a.	9.7	5.9	9.6	11.5	n.a.
December	6.3	3.6	7.1	n.a.	n.a.	9.3	5.9	9.9	11.7	n.a.
1991 January	6.5	4.2	7.8	n.a.	n.a.	9.0	6.3	9.5	10.7	n.a.
February	6.7	4.2	7.8	n.a.	n.a.	8.9	6.3	9.1	11.7	n.a.
March	6.6	4.2	8.0	n.a.	n.a.	8.2	6.3	8.0	10.3	n.a.
April	6.7		8.4	n.a.	n.a.	6.4	6.2	9.2	12.6	n.a.
May	6.8			n.a.	n.a.	5.8	6.0	8.3	10.9	n.a.
June	6.8			n.a.	n.a.	5.8	5.8	8.0	8.9	n.a.
July	6.7			n.a.	n.a.	5.5	5.9	7.5	6.8	n.a.
August	6.3			n.a.	n.a.	4.7	5.6			n.a.

Statistics for Germany apply only to western Germany. Data supplied by Datastream and WEFA from national government and IMF sources. Consumer prices: not seasonally adjusted. Producer prices: not seasonally adjusted. US – finished goods, Japan – manufactured goods, Germany – industrial products, France – intermediate goods, Italy – total producer prices, UK – manufactured products. Earnings index: not seasonally adjusted, refers to earnings in manufacturing except France and Italy (wage rates in industry). Hourly except Japan (monthly) and UK (weekly). Unit labour costs: seasonally adjusted, measured in domestic currencies. Germany – mining and manufacturing, other countries – manufacturing industry. Real exchange rate: IMF real effective exchange rate based on relative unit labour costs (non-normalised). A fall in the index indicates improved international competitiveness.

Are European stock markets converging ?



Source : Goldman Sachs

European integration and the risks of Emu

THE AMBITION of politicians can sometimes run ahead of economic realities. This may be true of the push to establish a single currency for Europe.

Convergence of inflationary expectations is a necessary condition for European monetary union (Emu) to work successfully – but it is not a sufficient condition. Irrevocably fixing the exchange rates of the potential member countries could be destabilising for the European economy unless the individual national economies are sufficiently well integrated.

A single currency means that individual countries can no longer use changes in exchange rates as a tool of economic policy. This loss of autonomy may be no bad thing when it prevents governments from devaluing to boost output today at the expense of higher inflation later.

Yet fixing exchange rates brings costs too. It also means that governments can no longer use exchange rates to offset the effects of surprise economic events which affect economies differently. Events such as sharp rises or falls in oil prices or one-offs like German unification can quickly push relative prices between countries out of line. Unless relative wages and prices are flexible and adjust quickly, the result will be lost output and higher European unemployment.

The potential costs of Emu therefore depend on the extent to which the individual European economies behave as one economy: the extent to which they suffer from different shocks: and the speed with which relative prices adjust. Many economists argue that the European exchange rate mechanism and the prospect of the 1992 single market have already increased the degree of integration between EC member countries.

At first sight the evidence suggests they may be right. The scale and timing of economic shocks can be measured using stock price movements. If two economies are affected in the same way by the same economic shocks then share prices in the two countries should move together. The average correlation between changes in the stock price indices of the main European economies has been rising throughout the 1980s.

First impressions can be misleading. Mr Sushil Wadhwani of Goldman Sachs has studied this increase in European stock market correlations. He finds that stock market correlations between the US and Europe have risen by as much as those between European markets since 1985. A closer analysis shows a rise in intra-European correlations has occurred largely because the individual European markets move more closely with the US. The ERM and the 1992 programme have had only a modest effect.

Furthermore, the main determinants of movements in individual company equity are national rather than European in origin. The more integrated the European economies become, the less national influences should matter relative to factors which affect all European companies in the same industry.

Yet individual stock prices remain considerably more responsive to the performance of national share prices than to European sector share prices, as the chart shows. Only in the UK do the national and European influences appear roughly equal.

Mr Wadhwani also finds that the relative returns of industrial sectors compared to the national average are poorly correlated across countries. The UK and German electronics sectors do not appear to outperform or underperform their national markets at the same time.

The evidence suggests that the main European economies are far from being fully integrated. Mr Wadhwani draws two conclusions: that the lack of European stock market integration still makes it profitable for investors to spread their risks by diversifying their portfolios across countries; and that investment companies should continue to employ individual country analysts.

The analysis also suggests that Emu remains a risky venture. The European economy is not highly integrated and country-specific economic shocks do occur. With exchange rates fixed, relative prices can only be realigned through changes in relative wages and prices. As labour mobility within the community is low, these adjustments could prove to be long and painful.

Edward Balls

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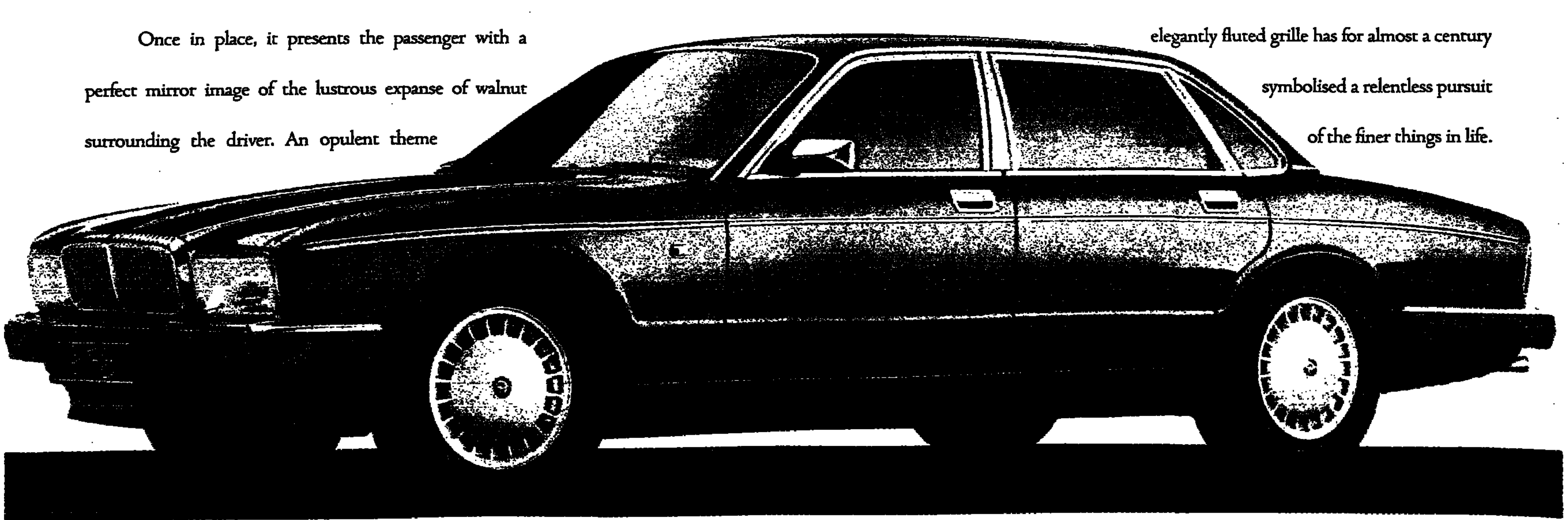
THE 1991 DAIMLER.



AS LONG AS THERE HAVE BEEN MOTOR CARS, THERE HAS BEEN DAIMLER.

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THE ECONOMY UNDER THE TORIES

The UK recovery: Major's major Catch 22

John Major faces his first Conservative party conference as leader this week – and the last before the general election. Will his decision to postpone the election provide enough time for the economy to recover and prove a winning stroke for the Tories? Or will it turn out to the biggest mistake of his short premiership? FT reporters examine the issues and ask some of Britain's top industrialist what they think.

THE GOOD NEWS for Mr Major, as he travels to this week's Tory party conference, is that the recession is probably over. The bad news is that the economy will not look in good shape whenever the election is called.

Whether the state of the economy and the level of consumer confidence are what determine British election results will be tested some time in the next nine months. Past evidence suggests they do.

The problem for the government, however, is that there is little it can do to change things for the better.

Mr Major does have the power to choose the election date. But he has neither the means nor the time to restore the economy to full health before July of next year.

His decision to delay the election until the new year may mean that consumers are more confident about the future when they come to vote. But this strategy is also fraught with risks and uncertainties.

Economic recoveries are always slow and sluggish in their first year. Output starts rising when companies stop cutting their stocks of finished goods. But spending and investment usually take another year to get going.

Post-recession hangovers normally linger for a year or more. The recovery is inevitably overshadowed by bad news. Unemployment keeps rising as companies struggle to restore profit margins. Many will go bankrupt as banks lose patience.

This recovery will be unusually sluggish. The hangover will be particularly severe because the party of the late 1980s was so riotous. The heady days of the late 1980s have left consumers and companies with crushing levels of outstanding debt.

Meanwhile, membership of the European exchange rate mechanism will keep interest rates high and growth rates low. UK interest rates, while lower than a year ago, are much higher than is usual at the end of a recession. In real terms, adjusted for inflation, they are even higher.

So far consumers and companies have used this year's interest rate cuts to pay off debts. Consumer spending is closely linked to the state of the housing market. But high debts, combined with high interest rates, have left that market depressed.

So the economic picture looks bleak. The recovery will be sluggish while unemployment and bankruptcies will dominate the economic news. The second half of next year is the earliest date for a new take-off in consumer spending or investment.

Not surprisingly, consumer confidence remains depressed. It has started to rise in recent weeks, but from very low levels. Consumers remain unwilling to make new purchases.

For the government this is not good news. Past evidence shows that governments are more popular when consumers are feeling confident (as the feel-good factor chart below demonstrates), when mortgage rates are low and when unemployment is stable.

Those at this week's conference who still carry a torch for Mrs Margaret Thatcher will argue that Mr Major's dithering about the general election date stands in marked contrast to the confidence with which she went to the polls. But Mrs Thatcher had the good fortune to time both the 1983 and 1987 elections to coincide with a peak in consumer confidence.

Unemployment was high, but rising only slowly in 1983 and falling in 1987. Today, mortgage rates are higher in real terms. Unemployment will be rising faster than at the 1983 or 1987 elections.

The government's problem is compounded by the regional pattern of recession. Most of the marginal Conservative-held seats which Labour needs for a majority are situated in the south and the midlands. These are the regions where the recession has hit deepest.

The recession has hit the over-borrowed south harder than the north. The fall in output has been most severe in the west Midlands. House prices are falling across the south, but rising in the north. Unemployment is rising fastest in the south and Midlands.

There is little the government can do to alter these economic realities – changes in economic policy require years rather than months to work.

The government can attempt to alter voters' perceptions and expectations. By closing off the option of a November election, Mr Major has already gambled that the economic situation will appear brighter by the new year. The recovery may be more robust by then, but only just. Unemployment should be growing more slowly, although its level will be much higher. The housing market may also have begun to recover.

Yet delay brings risks too. The longer the recovery continues at a sluggish pace, the longer consumers have to realise that the economy is not in as good shape as the government wants them to believe.

Even if further interest-rate cuts would boost consumer confidence, the government's room to cut rates is very limited. The pound has remained stable within its ERM band. Interest rates have been cut by 4.5 per cent since then.

Yet the difference in interest rates between the UK and Germany has fallen to 1.25 per cent from more than 7 per cent on October 5 1990. It is doubtful whether the foreign exchange market would tolerate UK rates below Germany's.

Mr Major is unlikely to test their patience. The best way to knock confidence on the head would be to have to raise interest rates again before the election because sterling slipped to the bottom of its ERM band.

The risk of upsetting the markets will also make pre-election tax cuts very difficult. The rise in spending and fall in tax revenues caused by the recession already mean a high level of public borrowing.

The government may, in any case, be forced to raise interest rates from their current levels. If Labour climbs in the opinion polls, and investors believe that Labour would devalue, investors may decide to hold their money elsewhere. Labour are firmly commited to maintaining the parity. But the markets can be fickle.

International events could also undermine this delaying tactic. The Bundesbank may raise German interest rates again if inflation keeps rising. Alternatively, the UK recovery could be thrown off course if the current weakness in the US economy continues and the authorities there allow the dollar to depreciate. This would both reduce the demand for UK exports and make them more expensive, stifling any chance of an export-led recovery.

All in all, the opportunities for pre-election fine-tuning are very limited – and could do more harm than good. Trying to set the election date for when the economy looks best is equally unpredictable.

Mr Major's decision to delay the election may turn out to be a winning decision. It may equally be remembered as the biggest mistake of his short premiership.

Edward Balls

Industrialists give a sobering message

By Charles Leadbeater and Andrew Taylor

THERE is a light, but it is faint and at the remote end of a long tunnel.

As the Tory faithful gather for their last conference before the general election, eager for news that things are looking up, industrialists have a sobering message for them about the state of the economy.

Industry has reached the bottom of a recession which has done much damage to the Tories' electoral standing. But it will take some time before the recovery is strong enough to inspire any optimism.

Business leaders from a wide range of industries – from retailing to construction, computers and cars – say conditions remain tough. Further cuts in interest rates will be required to secure the recovery, they say.

Lord Sterling, chairman of Peninsular and Oriental Steam Navigation (P&O), with its shipping, housing and property interests, says the country is emerging from the recession much more slowly than some people assert.

Mr Alan Sugar, chairman of Amstrad, the computer group, warns that it will be difficult for companies in his sector to make profits this year. "It is an unsavoury thought, but a most realistic assessment of the situation," he said.

Mr Tony Cleaver, chairman and chief executive of IBM (UK), the computer group, says there is little sign of an upturn in investment by companies in information technology. Mr Cleaver commented: "There are now a few signs of optimism returning, I think it unlikely that people will increase their capital budgets this year, and would not therefore expect to see any real upturn for some time."

Mr John Gardner, managing director of International Computers (ICL), the UK-based computer manufacturer owned by Fujitsu of Japan, said the recession was not over, but business was starting to plan for an upturn it expects next year.

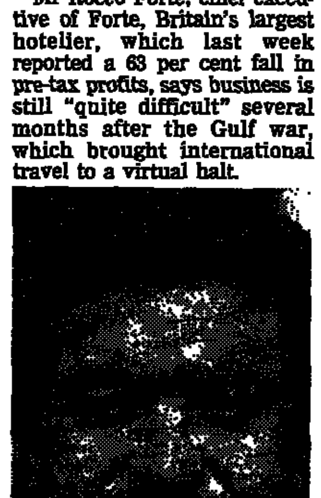
"We will not see the business benefits this year, but companies are talking to us again and building data-processing expenditure into their plans for next year," he said. "This is especially true of retailers, who are a good barometer of the economy."

Cuts in interest rates have helped the building industry, but only recently. According to Sir Clifford Chetwood, chairman of Wimpey, the only good sign of late has been a pick-up in housing sales over the past three weeks.

However, the gloom will take a long time to lift. Sir Clifford warned: "The construction recession has not yet ended. It will alone account for a 1 per cent drop in GDP this year and again next year."

He added: "The scene is set for general economic recovery, but this depends entirely on a recovery of confidence among consumers. This seems likely to come only slowly and tentatively with further growth in unemployment and election uncertainty still ahead."

Mr Rocco Forte, chief executive of Forte, Britain's largest hotelier, which last week reported a 63 per cent fall in pre-tax profits, says business is still "quite difficult" several months after the Gulf war, which brought international travel to a virtual halt.



Alan Sugar: sector profits hard to come by this year

The motor industry, which is resigned to this year's car market being 20 per cent down on last year, is starting to send marginally more optimistic signals. But Mr Geoffrey Whalen, deputy chairman and managing director of Peugeot Talbot, the carmaker, said : "We don't really see any signs of upturn. We believe that, towards the end of the year, there may be some improvement."

The industry was up in arms over tax changes in the last Budget which manufacturers said would push it further into recession. Now, says Mr Whalen, it has a simple message for the government.

"We must have car tax removed at the earliest possible opportunity if sales are to be brought back to a level for adequate profit in the home market," he argues.

Mr Michael Pickard, chief executive of Sears, one of the UK's largest retailers, with more than 3,000 shops, says that the early months of next year may begin to look quite good because retailers will be comparing their performance in 1992 with the early months of this year, when tourism and consumer sectors were depressed by the Gulf war.

So although few retailers have yet detected any signs of an improvement, Mr Pickard says: "Things will begin to look good and will start to angle up very sharply."

Industry is still looking to the government to foster the incipient recovery with further cuts in interest rates, but also to provide greater stability for business planning.

Sir Eric Parker, chief executive of Trafalgar House, said he would have liked an early election and a Conservative victory. He said uncertainty caused by delaying the election made it very difficult for companies to plan investment, and this was inhibiting economic recovery.

In addition to specific tax measures and cuts in interest rates, industrialists are also looking for the government to establish a closer relationship with industry in the wake of the recession.

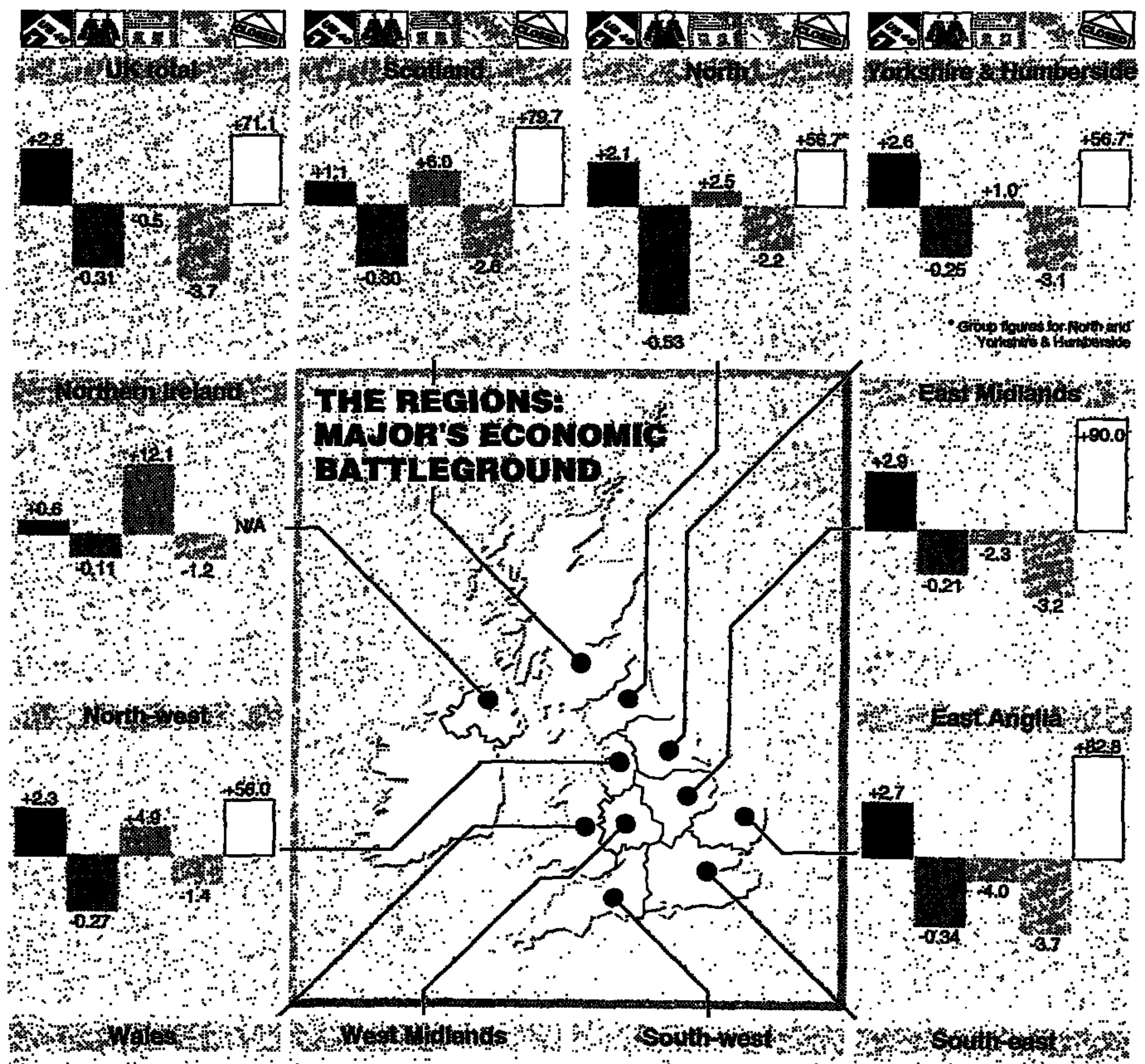
There is surprisingly little nostalgia for Mrs Thatcher and a great deal of support for Mr Major. Yet his selection as prime minister has not allayed concerns – fuelled by the recession – that the government still takes industry for granted. Sir Eric said contacts between industry and the government could be improved considerably. Despite the leadership change, there was still a feeling that business was not being listened to seriously enough.

Mr Ken Coates, executive chairman of Meggitt, the specialist engineering group, called for the replacement of Mr Peter Lilley as trade and industry secretary. He said: "The government should stop treating the DTI as a Cinderella department and put in a secretary of state of sufficient standing or character to do something about industry."

Mr Coates concluded on a note which might win the agreement of many fellow-industrialists. "The problems of industry will not disappear even with another 1½ per cent cut in interest rates," he said.

There is a lot of good will towards Mr Major, but he still has some work to do to repair the Tories' bridges with industries that have been so battered by the recession.

Additional reporting by Alan Cane, John Griffiths, John Thornhill and Richard Tomkins



Struggle facing worried blue line

By Paul Cheeseright, Midlands Correspondent

MR HENRY LOMAS made his son redundant three weeks ago. That, he asserted, is a measure of how "terrible", "absolutely shocking" and "critical" business conditions are for Yardley Tools, where he is a director. "I've voted Conservative all my life. But I'll take a lot of convincing to vote Tory next time, though I'm not saying Neil Kinnock will be any better," he said.

This disillusionment has extra piquancy because the Yardley Tools workshop, making precision cutting tools for the motor, aerospace and agricultural equipment industries, is adjacent to the Conservatives' Birmingham Yardley constituency office, where the economic view looks different.

"We do see the gentle ripples of resuscitation," argued Mr David Gilroy Bevan, Birmingham Yardley's Conservative MP since 1979, now sitting on a 6 per cent majority of 2,522. Yardley is one of 76 seats held by Tories with a majority of less than 10 per cent. Those are the seats that will determine the outcome of the general election.

"I think we are through the worst," Mr Gilroy Bevan said. Not only that. He claimed that the longer-term future is bright for people in this constituency on the south-east of the city.

He reasoned that the future of Rover, the carmaker, is assured. He cited the growth of service-sector jobs which, he claimed, has given Yardley one of the lowest female jobless rates in the West Midlands.

If Mr Gilroy Bevan could tell Mr John Major, the prime minister, what to say to the Conservative party conference this week, he would tell him that he need not fear for the west Midlands. "He will see the resuscitation exemplified here before most other places."

That is unlikely to cheer Mr Lomas and others like him. Yardley Tools' sales are running 30 per cent lower than last year, when there were seven people at the company. Now there are only four.

Yardley suffers when the engineering industry suffers. Unemployment had crept up to 10.6 per cent by the middle of the year – above the national average, but lower than the worst-hit inner Birmingham constituencies where the rate was 23.4 per cent.

Mr Gilroy Bevan is under pressure, with an election on the horizon, a slender majority and the Liberal Democrats cock-a-hoop after the local-government elections. But he remains optimistic. "There is a feeling here that things are getting better," he said.

It is not a view universally held. Ms Estelle Morris, the Labour candidate, argued that among Yardley residents there is "a feeling of lack of control about their destiny".

If Mr John Hemming, the Liberal Democrat candidate, is right, the job situation will deteriorate even if the recession is ending. People in Yardley "have relied on reasonably well paid manufacturing jobs. These jobs are going. What people have not noticed is the impact of automation on employment patterns," he said.

Some former Rover employees drink at the local British Legion. Mr John Rabin, the secretary, said: "Generally speaking people are pretty buoyant – they've been through worse times than this." But not Mr Lomas: "I think it is getting worse; the work is not there to do."

Magic wand needed from the wooden-spoon brigade

Major will want economists to be quick to spot an upturn, but on past performance they won't. Rachel Johnson reports

THE government not only needs a recovery to win the election. It is also dangerously dependent on the economics profession.

On past record, economists will probably fail to spot a recovery for months – and could thus fail to give the government the electoral boost a publicly hailed pre-election upturn would bring.

Tory politicians have taken most blame for the way that Britain plunged unexpectedly into recession in the third quarter of last year.

So has the Treasury, which is responsible for producing benchmark forecasts for the economy twice a year. But, according to Mr Bill Abbotts, managing director of a Cambridge-based machine tools company, economists are the villains of the piece – "a terrible clique who don't want to fall out with each other and never walk shop floors."

Mr John Shepperd, UK economist at Warburg Securities, gives reasons for his colleagues' "dire" forecasting performance. "We're not good at spotting turning-points," he explains.

In November, the consensus of 30 forecasts was for a rise of 0.4 per cent in gross domestic product this year

As the economy nears another turning-point, it is more important than ever to the Tories that the economists get it right. But their chances are not high. The factors which pushed the UK into recession – weak confidence among businesses and consumers, changes in the stock cycle, the Gulf hostilities – are hard to predict, and will also be pushing the main levers for recovery.

Very few economists foresaw that the UK would move into recession. In November, just after the Autumn Statement, the consensus of 30 non-City and City forecasts was for a rise of 0.4 per cent in gross domestic product this year. It appears that GDP will, instead, fall by more than 2 per cent.

Several institutions were on the right track. Golden gongs go to Smith New Court, Robert Fleming, the Confederation of British Industry and Mr Tim Congdon, of Lombard Street Research, for presciently downbeat GDP forecasts in November.

Last year, the CBI was castigated for being over-gloomy about falling investment, output and the severity of the recession. Now, it is a relative economic optimist, in company with the Institute of Directors, Bank of England and, most recently, the International Monetary Fund.

Mr Neil Williams, economist at the CBI, says: "Certainly the mood in the past month has changed slightly. We're now expecting sectors close to the housing market to pick up. Clothing, food and chemists are looking brighter."

Wooden spoons for being slow to spot the recession go to Williams de Broë, Nomura Securities, Panmure Gordon, UBS Phillips and Drew and the London Business School, all of which thought that the UK would enjoy some form of rude economic health – between 1.2 per cent and 2.3 per cent – in 1991.

Such a performance analysis conceals one dominant trait. Forecasters are much influenced by each other, move in a pack and revise all their numbers into consistency with official Treasury forecasts.

Not until after the Budget did the consensus forecast imply that growth would drop by 2 per cent this year; before it, three of the above wooden-spoon winners were sticking by their forecasts of positive growth for 1991.

Treasury economists are among the few to emerge with credit out of the recession. Its Budget was brave for producing forecasts which were among the first to make it clear how deep the government expected the recession to be.

Whole-economy output has started to rise, reflecting the start-up of North Sea oil production

And Mr Gavyn Davies of Goldman Sachs is trying to be among the first economists to win credit for calling an official end to the recession. He says that the consensus has "consistently trailed reality by some 12 months".

First, economists were slow to pick up the move into recession. Now they are being slow to notice that the economy reached its trough in the first half of this year.

Mr Davies says: "The decline in output was almost entirely a phenomenon of last year, with non-oil activity having moved essentially sideways since the beginning of 1991." Whole-economy output has started to rise, reflecting the start-up of North Sea oil production after a long period of interruptions as companies carried out for statutory safety work.

Even more than a revival in consumer spending, the government needs predictions such as that from Mr Davies.

Labour seeks disclosure of Tory funding

By Ralph Atkins and Ivo Dawnay

BRITAIN'S opposition Labour party will today step up its demands for further details of undisclosed private funding of the ruling Conservatives with the publication of figures on corporate donations and a new nationwide poster campaign.

The aim is to maximise embarrassment for the Tories in the week of their annual conference following recent allegations that they have received large cash sums, running into millions of pounds, from foreign businessmen.

According to the Labour figures, up to £9.5m spent by the Tories last year cannot be accounted for after corporate donations, constituency association fund-raising and a £4.5m deficit is subtracted from total 1990-91 spending estimated at £18m.

Mr Chris Patten, the Tory chairman, has refused to confirm or deny claims of donations from businessmen such as Mr John Latsis, a Greek shipping magnate, and Mr Asil Nadir, chairman of Polly Peck International, the collapsed electronics to fruit conglomerate.

By stepping up its attacks, Labour believes it can permanently neutralise Tory criticism of its own funding from trades unions – a traditional target for the Conservatives in the run up to an election.

The study points out that it is impossible to find out from where the bulk of Tory funds come. It claims, however, that Mr John Latsis, the Greek shipowner donated £2m and Mr Li Ka-Shing, the Hong Kong businessman, £100,000.

According to a Labour party analysis which suggests the Tories will have to rely heavily on personal donations to fund their election campaign, company donations to the Conservative party fell in real terms last year. Political donations to all parties increased by less than half a per cent in 1990 to £3.039m, the survey of 1,000 company reports shows.

Conservative party accounts for last year showed a deficit of £5m. The general election campaign could cost £20m.

British Airways, which donated £40,000 last year, has already said it will not donate to the Tories in 1991. The Labour party says other donors are likely to follow BA's lead, "as a response to the government's appaling economic performance and the consequent disastrous situation in which many sectors of British business find themselves."

Council workers vote to accept 6.4% pay offer

By Michael Smith

BLUE-COLLAR workers in local government have voted to accept a 6.4 per cent pay offer in a move of considerable symbolic value to the Labour party.

Local government workers were prominent in a wave of strikes over pay in the 1978-9 winter of discontent which helped to bring down the last Labour government.

Pay disputes involving them or any other public-sector group would be damaging to Labour in the run-up to the next election because of the party's links with unions.

Virtually all large groups of public-sector workers have now accepted pay deals or are heading towards settlements.

The exception is Inland Revenue staff. The Inland Revenue *Staff Federation* is fighting for an increase in a 6.5 per cent offer for their members, although industrial action is extremely unlikely.

Although it had always been unlikely that council manual workers would have taken action over this year's pay offer, the local government committee of Nupe, one of three unions involved in the negotiations, had advised rejection.

Union fights attitudes on Japanese investment

By Michael Smith

LEADERS OF the Trades Union Congress were accused by the AEU engineering union yesterday of cowardice and ineptitude over their stance on inward investment from Japan.

Mr Gavin Laird, AEU general secretary, said the general council of the Trades Union Congress (TUC) - the umbrella body representing most UK unions – were guilty of "crass stupidity" in supporting criticism of the "alien approach" by some Japanese businesses towards trade unions.

His comments in the AEU Journal are the latest salvoes in a debate which British industrialists and some unions leaders, including Mr Laird, fear will affect Japanese attitudes to setting up manufacturing plants in the UK.

Mr Laird's attack follows a motion at last month's TUC conference on inward investment which was controversial because it criticised Japanese projects over practices including beauty contests for union representation and no-strike clauses in pay deals.

In supporting the motion with reservations, the TUC general council said the criticism were not restricted to Japanese companies.

In his editorial, Mr Laird criticised the MSF general technical union, which proposed the motion. "We have come to expect outdated dogma from MSF but their negative and racist attack went too far."

Mr Ken Gill, MSF general secretary, said he was surprised at the "hysteria" surrounding the motion.

"The intention of the motion was that there should be a higher level of British investment in British industry and an end to dependence on foreign capital.

"That is not racist; it is looking after British interests. When foreign companies invest in Britain they should be prepared to observe the practices of the country."

Mr Willis was not available for comment. However, TUC officials are known to have been angered that AEU objections were not raised before the conference.

Dover likely to escape P&O takeover bid

By Richard Tomkins, Transport Correspondent

A view from the bridge: passengers survey Dover's eastern dock which P&O would like to lease as a ferry hub

The port of Dover, facing privatisation under the recently-passed Ports Act, seems likely to escape the bid which had been expected to come from Peninsular & Oriental Steam Navigation Company (P&O).

Mr Graeme Dunlop, managing director of P&O European Ferries, the P&O subsidiary which is Dover's main user, said: "We have no interest in owning the whole of the port of Dover.

"What we are interested in is taking a long lease on Dover's Eastern Docks, which is where our ships arrive and depart. But we are not interested in owning any UK ports."

Mr Dunlop's remarks come at a time when some of Britain's biggest ports are about to change hands as a result of the government's decision to privatise the trust ports, of which Dover is one.

This morning the ports industry will learn the identity of the four mystery bidders who are competing with a management-employee consortium to buy the trust port of Tees & Hartlepool in north east England.

One of the bidders is almost certainly Marine Transport Services, owner of Thamesport of the Thamesport container terminal on the Isle of Grain in Kent.

P&O had been widely tipped as a potential purchaser of trust ports because of its extensive maritime activities. But Mr Dunlop said P&O was interested only in operating freight or passenger terminals within ports - not in taking on the diverse responsibilities of a port operator.

Mr Dunlop's statement will come as a relief to the port of Dover. In the past its management has expressed grave reservations about entering the private sector for fear of predators such as P&O.

The reason for P&O's eagerness to control Dover's Eastern Docks is the competitive threat of the Channel tunnel, due to open in 1993. P&O European Ferries wants to be able to look after its passengers from the moment they arrive in Dover instead of having to wait till they board its vessels.

Mr Dunlop said that while the ferries would not be able to compete with the tunnel for speed, the tunnel would be unable to compete with the ferries for comfort and quality of service.

He envisaged that the tunnel and ferries would end up sharing the market because any attempt by Eurotunnel to drive the ferries out of business in a price war would trigger an intervention from the Monopolies Commission.

Midland Bank turns to new telephone operator

By Hugo Dixon

MIDLAND, one of Britain's largest clearing banks, is channelling a large proportion of its international telephone traffic through World Communications, the UK's newest international operator, in a move which may herald a price war in the market for international phone calls.

In a separate move, International Discount Telecommunications (IDT), based in New York, is seeking to exploit the fact that it is usually much cheaper to make international calls from the US than in the opposite direction.

IDT plans to launch its "reverse charge" service at the giant Telecom 91 exhibition in Geneva this week.

The WorldCom and IDT moves are evidence that current disparity between international call charges and costs is becoming unsustainable as entrepreneurial companies find cracks in the monopoly practices that have hitherto characterised the industry.

Midland, one of the largest users of international communications in the UK, was previously using Mercury Communications. By shifting part of its business to WorldCom to take advantage of discounts of about 20 per cent, it has lent credibility to the US-based company which is best known for running the hot line between the White House and the Kremlin.

British Telecom and Mercury cut their international charges by about 10 per cent last month but Mr Jim Donald, Midland's telephone manager, predicted they would have to cut them even further. Otherwise he said: "All the major companies will move to the likes of WorldCom."

WorldCom is a "reseller" – a new type of operator which collects traffic from large companies and channels it over private circuits leased from the duopoly. Other resellers are expected to enter the market because profit margins on international calls are high.

Midland's Mr Donald said 12 of the bank's main buildings in London had been linked up to the WorldCom service. So far, only 20 per cent of their international traffic was directed through the company but it would eventually ramp up to 80 per cent.

Under UK regulations, WorldCom has to connect customers to its exchange in the City of London by private lines, effectively limiting the appeal to those paying more than £5,000 a month.

IDT customers are given their own telephone number to call in New York. As soon as they hear it ringing, they put their phone down. A sophisticated gadget immediately calls them back and connects them to wherever they want in the world, paying US prices.

It claims the service costs half what BT charges and, in other countries, the saving is even greater. Most companies with international bills of over $500 a month can benefit, according to IDT. The company is understood already to have signed up NBC, the US television group, and Benetton, the Italian clothes company, as customers.

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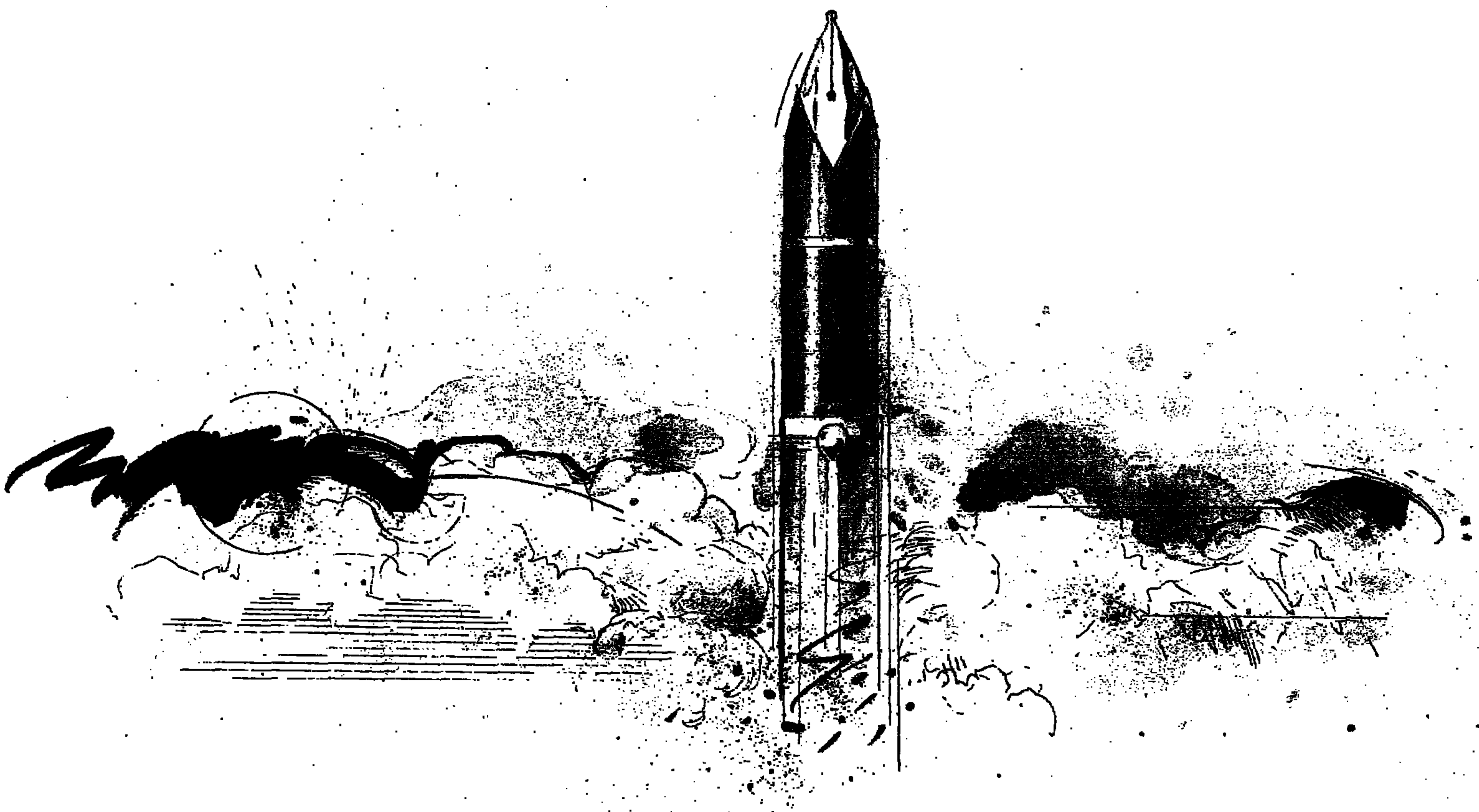

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MANAGEMENT

Reaping the harvest of an integrated team approach

Christopher Lorenz on an evangelical approach to collaboration at Deere

Anyone who is stirred by the challenge of creating fast, flexible, team-based organisations, either to develop new products and services, or to reshape entire companies, should travel to the banks of the Mississippi River in Moline, Illinois, and spend a day with Mike Wyffels.

This slim, bespectacled product engineering manager at Deere & Company's Harvester division is both a visionary and a ball of evangelistic fire. He has needed both characteristics to instill real teamwork into the Harvester business, one of the highest profile parts of the John Deere empire, and a key part of an organisation which was previously dominated by the heavyweight barons of a host of functional fiefs.

From the direct involvement of customers in the design and development process, to the close collaboration of the previously separate worlds of product and manufacturing engineering, he has made remarkable headway in the few years that he has been in charge of development at Harvester.

Wyffels first came to prominence last autumn when some of the achievements of his unit were heralded by Tom Peters, the American management guru. Peters shares the view of Professor Ikijuro Nonaka and other Japanese academics that an effectively managed product development process constitutes a model of the sort of multi-disciplinary, non-hierarchical "learning organisation" that companies of all shapes, sizes and businesses will have to become if they are to survive far into the 21st century. The way in which teamwork has evolved – by trial and error – over the last few years in Deere's Harvester business, in contrast to the sudden switch at the construction equipment division, holds various lessons for other companies.

In particular, it epitomises:

- The very real difference between many companies' practice of "simultaneous" or "concurrent" engineering, and what Deere calls fully "integrated engineering".
- The extent to which really effective teamwork requires the abandonment of the sort of matrix structures which have been common to most business organisations, especially within engineering. As Wyffels puts it: "We're getting rid of all those damned matrix boxes and the dotted lines between them."
- That teamwork cannot operate effectively with a steep managerial hierarchy above it. At Harvester, the number of layers has been halved since 1984; in the factory there are now only three levels between the machine operators and the division's general manager, the redoubtable Dick Kleine, who has been a vital ally for Wyffels' pioneering efforts.

Back in 1984, when Wyffels was the manager of the division's single most important project, the \$250m (£143m) development of a new "9000" line of harvesters (launched two years ago) the division was still suffering from the notorious "over-the-wall" syndrome. As Wyffels puts it, design engineers threw their plans over the departmental wall to the manufacturing engineers, who did their work and then turned to production saying: "Here, build this."

Kent Cornish (left) and Mike Wyffels: abandoned "over-the-wall" syndrome

The result was problems all around: with time, cost control, manufacturability, reliability, quality and the serviceability of the product.

The first step which Wyffels took on the 9000 project was to require that all design layouts be "signed off" by other functional specialists before they were released by the designers. In addition to product engineering and various aspects of manufacturing engineering, the functions involved were purchasing, reliability and foundry.

This arrangement did not work as well as expected. It was difficult to get the right people from these functions to come at the right time to the product engineering centre, which is three miles away from the factory; as a result, designs were constantly delayed. Even when the specialists turned up as scheduled, their involvement at the end of the design process was too late to be effective.

The next step, taken within a year, was to ask functional departments to assign people to the project full-time, in order to get better interaction early on, before individual parts of the design were started. But this also failed to work well, since most of the departments were reluctant to assign full-time people to a new product programme at a time when the pressures of making the current product were overwhelming.

So, in a matter of months the system was changed again. With the support of an unusually broad-minded works manager – and of vicious external pressures to save time, resources and cost – Wyffels achieved breakthrough: an agreement that the only way to get the necessary interaction and communication between the various functional groups was to have all the key members relocated together to the product engineering centre, where they could devote their full-time energies to various design and development projects.

In 1985, about 60 manufacturing engineers, the largest single functional group to be transferred, were assigned to a newly-created department, called Production Engineering – New Product, under the manager of product engineering, Wyffels' predecessor.

They were joined by representatives from the purchasing and reliability departments, working side by side in the same room as the design engineers. The number of transfers from the factory continued to rise over the next few years as work on the new range of harvesters increased: at its zenith, the number of transferred manufacturing engineers totalled 150, out of the engineering centre's then staffing level of 350 people. Since the launch of the new harvester range in 1989, the centre's staff has fallen to 250, half the level of a decade ago.

The transfer arrangement improved matters considerably and teamwork began in earnest. As Wyffels puts it: "We'd moved beyond the stage that many companies have still only reached today, of drawing new lines between boxes but still having a matrix. A lot of so-called simultaneous or concurrent engineering groups are nothing more than an official format."

But the harvester teams were still not fully integrated, in the full sense of the word. Within the engineering centre, a functional structure was retained, to which the newly-transferred specialists, as well as the design engineers, still felt they owed their prime allegiance.

As a result, issues still tended to be pushed for resolution up the separate lines of command.

This was one of the main reasons why the product cost of the new line ran over budget, and a number of field problems arose. In most other respects, however, the project was remarkably successful: the first 300 machines were built to schedule, something which "was virtually unheard of" according to Kent Cornish, senior division engineer for the Harvester works. And, remarkably, scrap and rework rates for this entirely new range of products were better than for the 10-year-old line they replaced.

Since 1987, the experience gained on the harvester project has resulted in two further stages of evolution.

What Wyffels calls "integrated engineering phase one" was used on a new planter. On this project, specialists were shifted on a part-time basis out of their functional departments on to a project team. To a great extent, the change was successful: the planter was developed in only 18 months against 26 for similar previous projects. It was launched early this year.

Then, in 1989, in the later stages of the development of a new rice harvester which was launched in August, came the real break away from functional allegiances for everyone working on new projects, with full integration into a virtually permanent team structure.

Specialists of every type were transferred to what Wyffels calls "cradle-to-grave project teams", working together from initial concept until well after the product launch.

The effects of this "integrated phase two" on people's team spirit, and the way they work, has been significant. Cornish says: "Problems no longer shoot up the hierarchy – different specialists on the ground just talk to each other and then get on with it."

Late last autumn, for example, a crash change was needed on a new product about to go into production, which required a drilling of twice as many holes in a part as originally intended. "Previously if I'd told the guy in charge of the line, I'd have been called into the general manager's office and there'd have been a row."

At Deere & Co's headquarters, John Gault, director of engineering services, is reluctant to commit himself to whether the approach at Harvester or at the industrial equipment division is more effective. "Circumstances differ, and in any case we don't have central control of how organisational structures are put together in this company – we're getting the benefit of multiple experiences, even if some of them turn out to be in error. Companies that take a single direction can turn out 100 per cent wrong," he says.

Back in the Harvester division, Cornish agrees that "there is no one way. We just know we will continue to evolve."

An article on teamwork at Deere's industrial equipment division appeared last Monday and reports on on rapid product development were published on June 28 and August 21.

Different tack up the Mississippi

Multi-functional teamwork at Deere & Co's Harvester division has come a very long way in the seven years since it began.

But what lessons are there for other companies in the fact that its approach differs from that now practised 80 miles up the Mississippi in Dubuque, Iowa, by Deere & Co's industrial and construction equipment division?

Both divisions are dismantling much of their old functional structure, and the matrix by which it was harnessed to the staffing requirements of individual projects. But neither is abandoning functionalism entirely: they are preserving an element of it in order to ensure that fellow specialists can learn from each other and keep up with advances in their technical disciplines.

The main differences between the two approaches are:

- Harvester is transferring an increasing number of specialists to its product development centre, and integrating them into multi-functional teams, directly under engineering management. Some product engineers are also moving into the factory to work on existing product projects.
- Dubuque, on the other hand, is transferring functional specialists, including those working on new projects, to a number of newly-created integrated businesses, directly under manufacturing management.
- Harvester's engineering and manufacturing operations are not "co-located", as at Dubuque, but a significant three miles apart.
- Of the two, Harvester has arguably taken the defunctionalisation process further.
- It has also moved further to merge the specialisms of product and manufacturing engineering, especially through the job rotation of carefully selected people.

Some of these differences are due to circumstances rather than to principle. For one thing, Harvester has had seven years of experience with multi-functional teamwork, Dubuque only three.

For another, in the words of general manager Dick Kleine, Harvester's complexity, and the size of its products, make it "quite tough to break all its operations into fully integrated cells," though this is happening within the factory.

The lack of co-location of engineering and manufacturing is regretted by almost every manager at Harvester, including Mike Wyffels, its product engineering head. The mistake was made back in the late 1970s because of the supposed need for secrecy and to remove product engineers from day-to-day pressures.

As soon as Deere's overall business picks up, and a new use can be found for the product development centre building, its activities are likely to be moved into the heart of the factory site.

As for the degree of transfer of functional specialists to integrated teams, both divisions intend to take this further.

Only over the ideal degree of what has become known in the US as "skunkworking" – the separation of teams working on totally new products from those improving existing ones – does there seem to be a radical difference of principle.

Ideally, in order to compress development times further, especially from the long (traditionally seven-year) cycle for large harvesters, Wyffels would like to split the engineering centre into two, whatever its location.

He would also like to reinforce the "skunkworker" motivation of those working on new products – rather like the IBM team which worked separately to develop the company's first personal computer in record time.

At Dubuque, one senior manager says: "We've talked a lot about the Wyffels' concept, but we're nervous about it. Separateness brings disadvantages as well as benefits."

As was argued in the introductory article to this series, separate "skunkworks" (or "tiger teams", as companies such as Honda prefer to call them), are really only suitable for the development of exceptional products, where the degree of novelty, as opposed to adaptations from a previous generation, is high.

Not even Wyffels would want to run the whole of Deere's harvester business in that fashion.

THE WEEK AHEAD

ECONOMICS

Inflation once again on the agenda

IT IS to be a week of inflation news and international financial meetings.

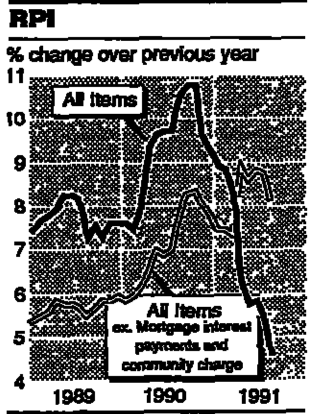
Finance ministers and central bank governors from the Group of Seven leading industrial countries will hold a special meeting with representatives of the Soviet Union in Bangkok at the end of the week. The International Monetary Fund/World Bank joint annual meeting also begins, while the council of the German Bundesbank is meeting in Frankfurt on Thursday.

There is to be more evidence that inflation is falling throughout the biggest economies – though officials are likely to urge governments to guard against an upsurge in inflation as the world economy has a moderate recovery in 1992.

Mr Neil Mackinnon, economist at Yamaichi Securities, says the two main reasons for lower inflation are "weak demand pull pressures and a declining trend in commodity prices."

In the UK, the RPI has come down from a peak of 10.9 around the time of Britain's entry into the European exchange rate mechanism to 4.7 per cent in August. Economists expect another sharp fall in the September RPI to 4 per cent. But October's 3.5 per cent is expected to be the low point. Thereafter, there may be a modest rise to around 5.5 per cent by the spring, as the beneficial effects of lower mortgage rates and the poll tax bills cease to flatter the index.

RPI



Other important events and statistics, with median market forecasts from MMS international, the financial research company in brackets, include:-

Today: Luxembourg, European Community finance ministers' meeting. Australia, Labour Day holiday. US, August consumer credit. UK, credit business (£210m) and final retail sales for August (down 1.4 per cent).

Tomorrow: UK, conservative party conference opens in Blackpool (continues until Friday). US, August wholesale trade. Germany, September unemployment west (10,000), employment west (25,000). Canada, August housing starts (164,000).

Wednesday: France, Bank of France report on French financial system. US, 2nd quarter retailers financial report. September Halifax house price index. Denmark, August current account. Canada, September help-wanted index, August motor vehicle sales, new house price index. IMF world economic outlook published.

Thursday: Germany, Bundesbank Council meeting. US, August housing completions, money supply, initial claims (420,000) Sweden, September consumer prices index. Australia, September employment.

Friday: Bangkok, IMF/World Bank annual meeting begins (continues until October 17), G7 finance ministers meeting. Apeldoorn, Holland, informal EC trade ministers meeting. US, September PPI (0.2 per cent), ex food and energy (0.3 per cent), September retail sales (0.2 per cent). UK, September retail prices index (0.3 per cent month-on-month, 4 per cent year-on-year), excluding mortgage payments (5.6 per cent). Canada, September unemployment rate (10.6 per cent).

During the week: Germany, August trade balance (DM1bn), current account (down DM3.5bn), September final cost of living (3.9 per cent), August retail sales (4.5 per cent). Switzerland, September CPI (5.7 per cent). The Netherlands, CPI (4.2 per cent).

Rachel Johnson

RESULTS DUE

THIS WEEK is small companies time on the results front, with only a few bigger businesses muscling into the limelight.

Most interesting to watch will be BM Group, the construction equipment company that last autumn took over Blackwood Hodge, a distressed distributor of heavy machinery.

BM is expected to report a near 50 per cent increase in pre-tax profit to £34m when it reports its results tomorrow for the year to June 30.

The trend-bucking progress is expected to owe less to Blackwood, which was losing money on the UK and in need of pruning overseas, than to the fleet-footedness of the established BM businesses.

The plant sales effort has been diverted from languishing areas like house building to the massive machines needed for road building, and exports of BM-made equipment have benefited from the new outlets offered by previous acquisitions.

Austin Reed, the upmarket clothing growth, is expected to show the full effects of the recession when it reveals its interim results on Wednesday. Retailing conditions in central London have continued to be grim but analysts will be keenly looking out for any tales of recovery.

The first half will have proved very difficult, but analysts are still hoping for a modest improvement for the full year ending next January on last year's pre-tax profits of £3.6m.

Hi-Tec Sports, the sports shoe distributor, is likely to report on Thursday a modest increase in pre-tax profits for the half-year to July to around £3.9m from £3.4m a year earlier.

A number of growth markets beckon, such as US demand for rugged hiking shoes.

Expanding European operations have also begun to pay off. Its shares have reflected this, taking off in late August to climb above the 142p at which it was floated in 1988. They closed yesterday at 201p.

UK COMPANIES

TODAY
COMPANY MEETINGS:
Adscene, Chiesman Pavilion, Kent County Cricket Ground, Canterbury, 11.00
Darby Group, Darby House, Sunningdale Road, Scunthorpe, 2.30
Fleming Enterprise Inv. Trust, 25, Copthall Avenue, E.C., 12.00
BOARD MEETINGS:
Finals:
Cooper Clarke
Scottish Asian Inv.
Interims:
Bridgend
Eurotunnel
Greenacre
Headlam

TOMORROW
COMPANY MEETINGS:
Fleming Overseas Inv. Trust, 25, Copthall Avenue, E.C., 12.00
Independent Inv., 1, Charlotte Square, Edinburgh, 12.30
Marina Developments, Athenaeum Hotel, Piccadilly, W., 11.00
Micklegate Group, Moorfield Business Park, Yeadon, Leeds, 10.00
Sterling Publishing, 24, Upper Brook Street, W., 10.00
Wentworth Intl., 190, Strand, W.C., 11.00
BOARD MEETINGS:
Finals:
BM Group
Barry Wehmiller
London & Manchester
Manchester Utd.
Pegasus Group
Interims:
Alexandra Workwear
Anglo Am. Inv. Trust
Childrens Medical Charity
Freeman Group
Johnston Group
Lawrence (Walter)
NMW Computers
QS Hldgs.
S & U Stores
Time Products
Walker Greenbank

WEDNESDAY OCTOBER 9
COMPANY MEETINGS:
Budgens, Skinners hall, 8, Dowgate Hill, E.C., 11.00
BOARD MEETINGS:
Finals:
Allied Leisure
Maunders (John)
Sinclair (Wm.)
Interims:
Austin Reed
Havelock Europa
Helical Bar
Landu Hldgs.
Martin Currie Pacific Tst.

THURSDAY OCTOBER 10
COMPANY MEETINGS:
Pifco Hldgs., Stanneylands Hotel, Stanneylands Road, Wilmslow, Cheshire, 9.30
TR City of London Trust, Mermaid House, 2, Puddle Dock, E.C., 3.30
BOARD MEETINGS:
Finals:
Town Centre Securities
Interims:
BNB Res.
Barlows
Camellia
Capital & Regional Props.
Finlay (James)
Grofund Intl.
Hi-Tec Sports
Transfer Technology

FRIDAY OCTOBER 11
COMPANY MEETINGS:
Border Television, Television Centre, Carlisle, 12.00
Jones Stroud, Donington Thistle Hotel, East Midlands Airport, Castle Donington, Derby, 12.00
BOARD MEETINGS:
Interims:
Atlas Converting Equip.
Cohen (A)
Gates (Frank G)
Hammerson Property
Robinson (Thos.)
Slingsby (HC)

Company meetings are annual general meetings unless otherwise stated.

DIVIDEND & INTEREST PAYMENTS

TODAY
Alba 3.35p
Avesco (Reg) 1p
Do. (Br) 1p
Bespak 5p
Braime (TF & JH) 2.25p
Do. A N/Vtg. 2.25p
British Assets Tst. 1p
Capita 1.8p
Clarke (T) 1.26p
Fife Indmar 1p
Five Arrows Chile Fd. Ptg. 25cts.
Francis Inds. 9% Un. Ln. 1994/99 $4\frac{1}{2}$pc.
Grand Metropolitan 8.4p
Hampson Inds. 1.773p
Hibernian 1.9p
ICI 21p
Kingspan 1p
Kuala Lumpur Kepong Berhad 5cts.
Macarthy 5p
Misys 3.51p
P & P 1.33p
Portmeirion Potteries 2.25p
PrinTech Int. 0.8p
Relyon 1.75p
Resort Hotels 2.2p
Stavert Zigomala 18.75p
TSB 3.15p

TOMORROW
Assoc. Brit. Consultants 4.2p
Black (A & C) 4.25p
CRH 2.15p
Fleming Enterprise Inv. Tst. 3.1p
Jacques Vert 6p
Matthew Clark 8.25p
Primadona 2.5p
Tiphook 10.3p
Ward Hldgs. 0.5p

WEDNESDAY OCTOBER 9
Aegis 2.75p
Ashtead 3.025p
Bletchley Motor 4.1p
Bradford & Bingley Bldg. Society Fltg. Rate Nts. 1998 £283.56
East Midlands Elect. 10.55p
Do. (Fly Pd) 10.55p
Do. (170p Pd) 10.55p
Do. (100p Pd) 10.55p
Eastern Elect. 10.12p
Do. (Fly Pd) 10.12p
Do. (170p Pd) 10.12p
Do. (100p Pd) 10.12p
Enterprise Oil Sub. Fltg. Rate Nts. 1998 £84739.38
Independent Inv. 0.45p
London Elect. 10.45p
Do. (Fly Pd) 10.45p
Do. (170p Pd) 10.45p
Do. (100p Pd) 10.45p
Manweb 11.2p
Do. (Fly Pd) 11.2p
Do. (170p Pd) 11.2p
Do. (100p Pd) 11.2p
Midlands Elect. 10.5p
Do. (Fly Pd) 10.5p
Do. (170p Pd) 10.5p
Do. (100p Pd) 10.5p
NORWEB 10.94p
Do. (Fly Pd) 10.94p
Do. (170p Pd) 10.94p
Do. (100p Pd) 10.94p
Northern Elect. 11.38p
Do. (Fly Pd) 11.38p
Do. (170p Pd) 11.38p
Do. (100p Pd) 11.38p
OKI Elect. Ind. 7.25% Bds. 1998 (Br) $3\frac{5}{8}$pc.
Regional Elect. Co's. Package Units £106.1545
Do. (Fly Pd) £106.1545
Do. (£1700 Pd) £106.1545
Do. (£1000 Pd) £106.1545
Rexmore 1.55p
SEEBOARD 10.36p
Do. (Fly Pd) 10.36p
Do. (170p Pd) 10.36p
Do. (100p Pd) 10.36p
South Wales Elect. 11.8p
Do. (Fly Pd) 11.8p
Do. (170p Pd) 11.8p
Do. (100p Pd) 11.8p
South Western Elect. 10.57p
Do. (Fly Pd) 10.57p
Do. (170p Pd) 10.57p
Do. (100p Pd) 10.57p
Southern Elect. 10.12p
Do. (Fly Pd) 10.12p
Do. (170p Pd) 10.12p
Do. (100p Pd) 10.12p
TT Group 2.2p
Treatt 1p
Union Bk of Finland Var. Rate Sub. Nts. 2000 \$170.90
Yorkshire Elect. 10.81p
Do. (Fly Pd) 10.81p
Do. (170p Pd) 10.81p
Do. (100p Pd) 10.81p

THURSDAY OCTOBER 10
Banks (Sidney C) 5.5p
Barclays 9.15p
Bradford & Bingley Bldg. Society Fltg. Rate Nts. 1997 £281.38
Halifax Bldg. Society Fltg. Rate Ln. Nts. 1992 £140.99
Morris (Philip) 52.5cts.
Nationwide Anglia Bldg. Society Fltg. Rate Nts. 1995 £140.99
Oriel 1.8p
RBC Int. Cap. Fd. Ptg. Rd. Pf. 32cts.
Sanwa Australia Fltg./Fixed Rate Gtd. Nts. 1997 \$3369.30
Victaulic 4.7p

FRIDAY OCTOBER 11
AAF Inv. 5p
Abbey National Treasury Services (OUT) 8% Nts. 12/7/91 4pc.
Abingworth 6p
Aerospace Eng. 1.58p
Alliance Tst. 14p
Do. 4% Pf. 1.4p
Do. $4\frac{1}{4}$% Pf. 1.4875p
Do. 5% Pf. 1.75p
Burford Hldgs. 0.45p
Central Am. Bk for Econ. Integn. Fltg. Rate Ser. Nts. 1994 \$85.40
Chieftain 1.9p
Conversion 10% 2002 5pc.
Courts (Furnishers) 3.17p
Crown Eyeglass 3.5p
EBC 3.5p
GMAC Australia (Finance) $14\frac{1}{4}$% Nts. 11/10/95 $7\frac{1}{8}$pc.
Gardiner 0.47p
Genbel Invs. 18.5cts.
Greggs 4.75p
Hongkong & Shanghai Banking Prim. Cap. Und. Fltg. Rate Nts. 3rd Ser. \$81.46
Impala Platinum 195cts.
Islington Corp. 12.65% Rd. 2002 6.325pc.
Jones Stroud 5p
Kleinwort Overseas Inv. Tst. 1.5p
Lec Refrigeration 4p
Life Sciences 1.15p
Lloyds Abbey Life 6.3p
Macfarlane (Clansman) 1.75p
Marine Midland Fin. Gtd. Fltg. Rate Sub. Nts. 1994 \$16.29
Midland Bank 1.7p
National Australia Bk. Und. Sub. Fltg. Rate Nts. \$326.51
NatWest Bank 6.125p
Paramba 0.55p
Pifco Hldgs. 4.25p
Do. A Lim/Vtg. 4.25p
Richardsons Westgarth 1.2p
Southend Property 2.48p
Do. Pf. 3.75p
Stirling 1p
TI Group 7p
Vibroplant 2.38p
Wassall 1p

SATURDAY OCTOBER 12
Enterprise Oil $11\frac{5}{8}$% Un. Ln. 2016 5.8125pc.
Ireland $12\frac{1}{2}$% Ln. 2008 (Reg) $6\frac{1}{4}$pc.
Do. (Br) $6\frac{1}{4}$pc.

SUNDAY OCTOBER 13
Treasury 8% Ln. 1992 4pc.
Treasury 9% Ln. 2008 $4\frac{1}{2}$pc.
Treasury 9% Ln. 2008 C $4\frac{1}{2}$pc.

Sherwood Computer chairman retires

- SHERWOOD COMPUTER SERVICES has appointed Mr Bob Thomas, who has served on the board as a non-executive director since 1988, as its new non-executive chairman.

Mr Thomas succeeds Mr Trevor Entwhistle, who is retiring after being chairman since 1988. Mr Thomas is a director of programmes at Ashridge Management College and is chairman and director of a number of private companies.

- Mr Michael Ralph has been made finance director at INTERNATIONAL RESORT HOLDINGS. He was formerly finance director at Country Club Hotels, a Whitbread subsidiary.

- Mr Gavin Hall has been appointed technical director of TRADA TECHNOLOGY, a subsidiary of the Timber Research & Development Association.

- FRAMLINGTON GROUP has appointed to the board Mr Julian Gaisford St Lawrence. He is a senior fund manager and has worked in the group since January 1983.

- THE RUTLAND GROUP has appointed Mr Bill Oliver as group finance director.

Mr Oliver has been finance director of Alfred McAlpine since 1985 and before that was with Barratt Developments.

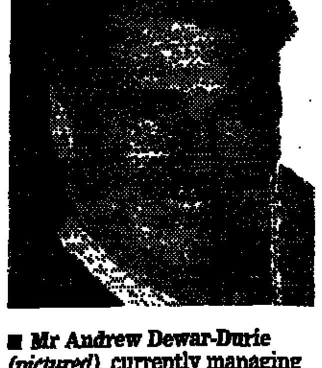
- Consulting engineers KENNEDY & DONKIN BUILDING SERVICES, part of the Kennedy & Donkin Group, has appointed Mr Rex Pengilly as its business director.

Mr Pengilly was previously divisional director for marketing and corporate sales at Matthew Hall Mechanical and Electrical Engineers.

- ST PAUL UNITED KINGDOM, a member of the St Paul Companies Inc, has appointed Mr David Larwood as finance director and Ms Beverley Shreeve as deputy general manager, personal lines.

- CLAYFORM PROPERTIES has announced that Mr Robert Ware has become sole managing director to allow Mr Brian Dowling to concentrate on property matters.

Mr Martin Brayshaw has become finance director and his position as company secretary has been taken by Ms Rita Crompton.



- Mr Andrew Dewar-Durie *(pictured)*, currently managing director of JAMES BURROUGH, has been appointed to succeed the retiring Mr Alistair Cunningham as managing director of ALLIED DISTILLERIES.

Mr Patrick Burke, currently sales director of Allied Distilleries, will become managing director of James Burrough. Mr John Beckerleg, sales operations director of James Burrough, has been promoted to sales director of Allied Distilleries.

Both Allied Distilleries and James Burrough are subsidiaries of Hiram Walker Group, a division of Allied Lyons.

- Mr Peter Francis, executive director of BERKELEY, has been appointed chairman of JAMES CROSBY GROUP, the north-west based residential housebuilder acquired by Berkeley in March.

Mr Michael Burgess has resigned as a director of Berkeley and chairman and chief executive of Crosby following Crosby's integration into Berkeley in order to pursue other interests.

- GALLIFORD, the Midlands-based construction group, has appointed Mr Gordon Taylor to the board as independent non-executive director. Mr Taylor has been finance director of IMI since 1987.

- Mr Allan Richens will join the main board of THE HOLLAS GROUP as a director.

Mr Richens has been chairman of Hawkshead Sportswear, the group's mail-order retailer, since last year, and from 1983-90 he was financial director of Empire Stores.

CONSTRUCTION CONTRACTS

£60m work for Amey company

AMEY CONSTRUCTION has received new orders worth over £60m in the past two months. In addition to £37.4m on the M4 Brynglas/Malpas relief road in South Wales, the company has been awarded a £11m contract for the PSA/MOD at RAF Machrihanish and £3.5m for communications ducts in East Anglia, also for the MOD, through GEC-Plessey.

Further roadworks include the A421 Wendlebury to the M40 at £3.9m, reconstruction of a section of the A34 valued at £1.6m, both in Oxfordshire, a £540,000 contract at Shenley Wood, Milton Keynes,Trafford Wharf Road in Manchester at £2m, £800,000 worth of work at Rocky Lane for Birmingham City Council and a £200,000 contract for an ethylene pipeline in the north west. Local surfacing/civil works in Berkshire total £300,000.

Golf club project

KIER INTERNATIONAL, the overseas contracting arm of CHB Group, has been awarded its first contract in Japan. The contract forms part of a £10m project to construct a golf clubhouse in Toyohashi.

Kier's role is to ensure that the clubhouse is designed, constructed and finished to a typically British theme on behalf of Chunichi the Japanese architect for the scheme.

To achieve this, Kier will be providing detailed design services for the exterior and interior, procuring materials from the UK and supervising the building methods to ensure that the completed building has a traditionally British atmosphere.

Roadworks

BIRSE CONSTRUCTION has received orders worth over £13m. Heading the list is a £7.6m contract for the dualling of section 5A of the A299 Thanet Way for Kent County Council.

Somerset County Council has also awarded the company work on the Ashill-Southfields section of the A358 worth £3.5m.

An order, worth about £2m, has been awarded to Birse by the British Airports Authority at Gatwick for the reconstruction of taxiways 3 and 4 in Marshall asphalt.

Devon's missing road link

TARMAC CONSTRUCTION has started work on a £27m scheme to complete Devon's major dual carriageway from the M5 to Cornwall.

The 13 mile A30 Okehampton to Launceston scheme will provide the missing link in dual carriageway along one of Britain's most popular holiday routes.

The project has been specially designed and planned in consultation with English Heritage and local archaeologists to take into account the beautiful surrounding countryside and environment.

The dual carriageway will run from the existing Okehampton bypass at Sourton Down to the eastern end of the Launceston bypass at Liftondown, removing through traffic from the villages of Lifton and Lewdon.

The work includes the construction of 20 kilometres of 7.3 metres wide dual two lane carriageway with one metre side strips each side, three interchanges with associated slip roads and side roads, and the building of 14 bridges, four across rivers.

The scheme, expected to take 63 weeks to complete, is among £33.6m worth of contracts awarded to Tarmac Construction.

Other road schemes included £3.1m worth of maintenance work on 4.1 kilometres of the M26 from junction 2A to junction 5 for Kent County Council, and reconstruction work, costing £1.8m on the A38 between Swinfen interchange and Cappers Lane for Staffordshire County Council.

The contract housing division has won orders for sheltered housing at Govan, Strathclyde for Elderpark Housing Association (£800,000); housing refurbishment at Easington Colliery for Bradford & Northern Housing Association (£430,000); and home improvements at Rochdale (£410,000).

Water treatment plant development

MJ GLEESON GROUP and PWT PROJECTS share equally a £40m joint-venture contract awarded by Thames Water for the design and construction of a water treatment plant utilising technologically advanced processes at Walton-on-Thames, Surrey.

To be constructed alongside an existing treatment works which will eventually be decommissioned, the new plant is needed to increase treatment capacity at Walton to 200 megalitres per day and improve water quality in respect of pesticides and trihalomethanes.

Gleeson and PWT are now designing pumping, waste and sludge treatment plant; process treatment units; ICA/SCADA system; control room and administrative facilities; and associated power supplies.

Construction will commence in April 1992, with hand-over of the plant to Thames Water scheduled for 1995.

Care centre for American hospital

Two companies within the construction division of TRAFALGAR HOUSE have recently been awarded contracts with a combined value of over £18m.

The largest has been awarded to Federal Construction, based in St Petersburg, Florida, and is valued at £11.76m (US$20.8m) for the construction of a five-storey critical care centre at The Sarasota Memorial Hospital. The 162,000 sq ft project will provide Sarasota County with a facility specifically designed to care for critically ill patients including an emergency centre, 20 operating rooms, laboratories, cardiac rooms and intensive care units.

Another divisional company, Trafalgar House Construction Management, has been appointed the management contractor for the £7m fit out of Fountain's Business Park on the Great West Road, Brentford for international healthcare company SmithKline Beecham's new corporate base.

The project will provide 140,000 sq ft of office, conference and catering facilities, four of the five buildings being linked by underground walkways. The scheme also features the latest information technology services, including fibre optics and satellite communications.

Cinema complex for the Coventry area

HIGGS AND HILL MIDLANDS has been awarded a £3.9m contract by National Amusements for a 12 screen cinema complex on the outskirts of Coventry.

The complex is to be built on a greenfield site at the junction of the M6 and A46 east of Coventry and will be the seventh Showcase cinema complex to be built in the UK by National Amusements, an American-based company.

The building will be part single and part two storeys, constructed of exposed concrete blockwork with feature grooving on the external face.

Hall & Tawse active

HALL & TAWSE GROUP has clinched a further £20m of contracts. Hall & Tawse Partnership has signed more than £7m of new projects. Work includes the company's first project outside its traditional operating base of the south of England. The project, worth just over £1m, involves the design and build of 25 houses on four sites in the Harborough area of Leicestershire for the East Midlands Housing Association.

Aberdeen-based Hall & Tawse Scotland has gained contracts worth more than £10m. Heading the list is a £2.7m contract to rebuild the exterior of the fire-ravaged Mar Lodge on Deeside to its former glory. Other contracts include a £1m order for a six-storey car park at Aberdeen Harbour.

Dartford bypass scheme

The £7.8m contract for the Dartford northern bypass has been awarded by Kent County Council to the eastern region of FAIRCLOUGH CIVIL ENGINEERING, part of AMEC, the international construction engineering and development group.

The two lane dual carriageway will ease traffic problems at Dartford town centre, provide a direct connection between Erith, Thamesmead and the M25 and create development and employment opportunities in north Dartford. The bypass will run 3km from the A206 at the Bexley/Kent boundary to the A282 at Stone Marshes interchange taking 35 per cent of heavy goods vehicles and preventing an estimated 25 personal injury accidents on Dartford's residential routes.

The bypass will have dual 7.2 metres wide carriageways with one metre wide margin strips on each side of each carriageway. The central reserve will be 2.5 metres wide with verges 2.5 metres wide rising to 3.5 metres in cuttings.

Two major bridges will be built - one a three span crossing Dartford Creek with sheet piled coffer dams to provide temporary works and a single span bridge crossing west Kent main sewers.

At the western end a new roundabout is needed and at the eastern end a pedestrian subway.

ARCHITECTURE

Countdown to the annual Financial Times Awards

Juries meet in smoke-filled rooms, judges resign, shortlists appear; who will will be gonged, honoured, Bookered or en-Nobelled?

This newspaper has a long and distinguished record with one particular award. The Financial Times was the first international newspaper to take architecture seriously and the time is approaching for the announcement of the winners of the "Financial Times Architecture at Work Award" this year. On November 4 in the splendid surroundings of Inigo Jones's Banqueting House in London's Whitehall, the Secretary of State for the Environment, Michael Heseltine, will announce the winning names.

The award began life in 1967 as the "FT Industrial Architecture Award". Looking back, there seemed to be a clearer sense of architectural purpose than is evident today. It was a time when there seemed to be a lot of national clearing up to be done. Industrial sites in the post war years had become derelict and there was a confident spirit abroad in the world of the New Towns nourished by the spirit of the new white hot technology. It was a time when atomic power stations seemed to promise endless "clean" energy at the touch of a switch. Industry seemed to be about to undergo a transformation and the world of the factory, clocking-in and "Workers' Playtime" appeared to be almost banished.

The objectives of the FT Award were to encourage British industry to commission the best architects to design the best buildings. The first prize-winners in 1967 were a prophetic choice. A young firm founded in the early 1960's called Team 4 won the award for the Reliance Controls factory in Swindon. The two leading partners in the firm were Richard Rogers and Norman Foster.

The judges in the 1970s unfailingly picked winners who were to become major influences in the next decades. Arup Associates working for IBM; Farrell and Grimshaw working for Hermann Miller; Michael Hopkins working for Greene King; and Piano and Rogers working for PA Technology. The award also identified the creative clients, highlighting the few companies who saw good architecture and design as important elements in their affairs. The high quality of the best public authorities was also noted with prizes for the Greater London Council Architects' Department and for the Development Corporation in Milton Keynes.

The award was to change in 1982 as a response to the changing nature of industry and employment. "Industrial architecture" did not seem to embrace enough of the new working world. Architecture affected peoples' lives in offices, in small high-tech assembly plants and in the new world of the business park. Even leisure, which once meant free time, had become an industry. "Architecture at Work" was the new title adopted in 1982, when the rather diverse joint winners were the radio-chemical centre for Amersham International plc by the Percy Thomas Partnership and the Humber Bridge by Freeman Fox and Partners – which was chosen as much for its structural elegance as for its anticipated contribution to employment in the region.

Architecture has become a much more discussed subject than it was in the early 1960s. It is now undoubtedly considered to be hot media material – awards both major and minor have blossomed, and the awareness that good architecture means good business has slowly begun to be understood in the nation's boardrooms.

This year there were almost 100 entries for the FT Award. The judges represent the spectrum of architectural thinking – Nicholas Grimshaw, architect of the Channel Tunnel Terminal at Waterloo and recent winner of the competition to design the Berlin Stock Exchange; and John Outram, winner of the recent competition to design the Judge Management Centre at Cambridge University and a radical thinker about the future of architecture.

A feature of the FT Award has always been the inclusion of a distinguished layman with an interest in architecture on the judges' panel and Lord Gibson, former chairman of the Arts Council, the National Trust, and of Pearson, has taken on this demanding role for several years.

This year a short list of twelve significant buildings was visited by the jury. They are, in no particular order:

- Exchange House, Primrose Street, London EC2: architects, Skidmore Owings and Merrill for Rosehaugh Stanhope Developments plc.
- Studios in Agar Grove Camden Town London: architects, David Chipperfield for Derwent Valley Holdings plc.
- Broadgate, London EC1: architects, Arup Associates for Rosehaugh Stanhope Developments plc.
- Imagination Ltd, Store Street, London, WC1: architects, Herron Associates
- Don Valley Stadium, Sheffield: architects, Design and Build Services Sheffield City Council for Sheffield for Health Ltd.
- Four buildings at Stockley Park, Uxbridge, London for the Stockley Park Consortium Ltd: architects, Ian Ritchie, Arup Associates, and Troughton McAslan Ltd.
- RMC House, Egham, Surrey: architects, Edward Cullinan Architects Ltd, for the RMC Group plc.
- Milton House, Abingdon, Oxfordshire: architects, Aldington Craig and Collinge, for W.H. Smith Ltd.
- Chilworth Research Centre, Romsey, Hampshire: architects, Edward Cullinan Architects Ltd for MEPC Developments.

From this list the judges have chosen a number of schemes to be highly commended and one outstanding winner. I shall be describing those that reach the short list in more detail in the coming weeks. They make a telling and fascinating survey of the state of the art of architecture in Britain today.

Colin Amery

The Grand Kabuki

LYTTELTON THEATRE

Of the many features to acclaim in this Grand Kabuki programme by the Shochiku Company, the most exceptional is the art of the *onnegata* or female impersonator – an art demonstrated here at a highly sophisticated level and with astonishing and transporting skill. Bando Tamaburo V, today's star *onnegata*, makes his British debut in two radically dissimilar roles. No less remarkably, Nakamura Kankuro V, first seen in *Narukami* as the Samson to Tamasaburo's Delilah, returns in *Kagami-Jishi* as the dancing girl Yayoi and then, transfigured, as the powerful and frenzied spirit of the the mythical *shishi* lion.

These extraordinary performers, among the glories of world theatre today, continue at the Lyttelton Theatre until October 19; and they are worthily framed by supporting players and musicians. Though western culture supplies many superb, moving and/or hilarious examples of female impersonation, it remains true that to many of us the idea of female impersonation is generally objectionable. Western drag usually belittles and stereotypes women; and the degree of self-indulgence often involved makes matters worse. The art of the *onnegata*, however, is remarkably objective, and the female roles are complex and powerful conceptions.

In *Narukami*, a spoken drama with lyric interludes of mime, song and athletic dance, Tasaburo is the sly Princess Taema who, in disguise as a grieving widow, visits the celibate priest Narukami and plies him with salaciously flavoured stories and *sake*. In this deadlier-than-the-male role, the key to the greatness of Tamasaburo's playing is that his Taema is always inscrutable. At first, he's marvellously sly and dangerous; then, in the big scene when Nurukami sleeps and Taema climbs the steep mini-mountain to release the rain dragon, he achieves an absurd kind of driven, desperate heroism.

Kankuro plays Narukami, catching not only the susceptibility of the seduced male but then the massive vehemence of his later vengeful transformation into the thunder god. Nothing about him here is delicate. He's all male – which makes him innocently comic, pathetic and, when transformed, thrilling. All the more amazing, then, when he appears in the next work, *Kagami-Jishi*, as the young Yayoi who, reluctantly, must dance. Quiet and feminine in a long kimono here, he keeps turning, bending, gesturing, always soft and refined in the use of his neck, knees and the hands which weave in the air the dance's initial imagery.

Later, Yayoi/Kankuro acquires two fans, which she/he spins and catches, still gently and with poise. Finally she is given the lion mask, which starts to possess her, pulling her one way (snapping at butterflies) as she is facing elsewhere. After a dance by two child-size butterflies (performed by Kankuro's two sons), Yayoi re-enters, now in lion form as Shishi, in gorgeous blue-and-gold robes with a long mane of white hair. The work's climax is the huge rage of the lion, gadded from sleep by the butterflies, in which it thrashes its mane in accelerating circles and crash-jumps into sudden stamp-landings. With Kankuro, the role of Yayoi/Shishi is a *tour de force*, an enthralling metaphor for the actor's art.

The evening's last work is *Sagi Musume*. In this long winter dance solo, Bando Tamasaburo V is the heron spirit of a girl who died unhappy in love. In one kimono after another, she re-lives her happy past, dances to folk music, recalls other climates. Among the musicians, a tenor sings with piercing sweetness. The snows start to fall, and now she turns and falls in increasing helplessness and torment. This great solo, deeply poetic and humane, is the *Winterreise* of the *onnegata*. Tamasaburo commits himself utterly to his role. His combination of emotional intensity and cool delicacy is sublime.

Alastair Macaulay

Alastair Muir

Tamasaburo: combines emotional intensity with cool delicacy

SPONSORSHIP

Persuasive music in the air

Apart from politics the twin passions of David Mellor, now Chief Secretary to the Treasury but once briefly Arts Minister, are Chelsea Football Club and the London Philharmonic Orchestra. Sometimes he manages to merge them

The big backer of Chelsea is Commodore, the computer company. Now, surprise, surprise, Commodore has come up with its first arts sponsorship, a £120,000 backing for the LPO. Indeed, it is the orchestra's biggest supporter at the Royal Festival Hall this season, sponsoring seven concerts.

To make sure the link makes an impact, the LPO is putting some of its own advertising budget towards a £20,000 joint promotional campaign through cinema advertising and commercial radio. It is the aim of press adviser Judy Grahame to ensure that all major sponsors of the orchestra invest in promotional advertising campaigns.

Some such development is needed because sponsorship is much harder to find this season. One company tried to withdraw from sponsoring an LPO concert because it was reluctant to be seen spending the money when it had just announced a sharp fall in profits. In the event it is going ahead, but cutting out the after-concert party.

The four big London orchestras have become more dependent on commercial backers as their Arts Council subsidy has steadily declined. Commodore has greatly improved the LPO's showing, raising revenue from this source by more than £100,000 on the 1990-91 season, to £825,000 for London alone.

In the main the orchestras have not done badly at raising sponsorship in a hard economic climate. They may not have achieved the higher targets they set themselves for this season – and there are unsponsored concerts at the Royal Festival Hall which in previous seasons would have attracted backers – but their main concern is raising money for 1992-93.

The RPO is starting this season with £850,000 in sponsorship cash – roughly the same as last season, but below target. This figure includes £250,000 from Cellnet and European Vinyls to finance a tour of EC capitals in the spring. The Philharmonia has brought in roughly the same as last year, around £500,000, and is relieved that its biggest backer, what was Nissan UK but, after a dispute with Japanese Nissan, is now called the A & F Group, is maintaining its ten-concert, £150,000 support.

The LSO expects only a modest increase in sponsorship for its London concerts and has £525,000 pledged to date, in spite of its recent critical success and extra money from the City and the Arts Council. There are still concerts at its Barbican home waiting to be sponsored by any company with £15,000 to spare (This is the going rate for a London concert, although orchestras have been known to take less *in extremis*.) However, for its tours of the US and Japan next year the LSO is getting £500,000 from Takeda, the Japanese chemical company. Without the Japanese companies, a future for all the major London orchestras would be hard to guarantee.

★

Last week the tobacco companies were subject to yet more restrictions on their freedom to advertise. Not surprisingly they are examining alternative avenues of promotion and are thinking hard about the arts. The wheel has turned full circle. In the 1970s, when corporate arts sponsorship first surfaced as a concept, the Association for Business Sponsorship of the Arts (ABSA) was virtually a creation of the tobacco companies. Its first office, in 1976, was in the headquarters of Imperial Tobacco.

Then the tobacco companies lost interest in the arts, and, apart from a few marginal investments, like the Silk Cut jazz concerts and the Benson & Hedges design awards, presented last week, they have played little part in the growth of the industry. They reckoned that the arts were not an effective way of marketing brands, and many leading arts organisations, like the Royal Shakespeare Company, were unwilling to accept money from the tobacco industry anyway.

The chief executives of tobacco companies are still asking the arts to prove that it can promote brand awareness as well as massage the corporate image and provide opportunities for corporate hospitality. But companies like Gallaher are aware that the drinks companies, notably the brewers, are promoting brands through sponsored arts events.

One problem has been the advertising agencies, which prefer the substantial commissions they receive from display advertising to any fees they might grab from guiding clients through the tricky world of the arts. But in the future we can expect quite substantial tobacco financed sponsorships, with leading arts companies swallowing their ethical doubts in favour of the money.

★

Sponsors are slow to cash in on the growing popular craze for opera but one of the trendiest ice cream makers, Hägen-Dazs, will shortly announce that it is to support the equally trendy Opera Factory in its revamped *Don Giovanni*, which returns to the Queen Elizabeth Hall in November.

The up-front money is £15,000, but because Hägen-Dazs is a first time sponsor Opera Factory could get another £15,000 under the Business Sponsorship Incentive Scheme. If the relationship progresses as planned we could well see the sexier opera singers selling ice cream as well as their bodies in those raunchy ads for the product.

★

One of the smartest decisions of the Arts Council was to embrace the concept of sponsorship. Initially it was sceptical about the growth of an alternative form of arts funding, but these days it is ABSA that is more suspicious about the success of the Council in raising money from sponsors, mainly for innovative projects. ABSA fears that is that it is selling cheaply its prestige and influence.

The latest coup by the Council's Sponsorship Unit is Image 90s, under which ten young photographers will receive commissions of £3,000 each and a guaranteed show at the National Theatre. The project is sponsored by Greene King, the brewers, which, with one eye on the sponsorships of Becks Bier and Holsten Pils, is keen to use the arts to give its IPA bitter a contemporary image. The total commitment of £50,000 includes Athena International publishing the winning photographs in poster form.

Other Arts Council sponsorships are £3,000 from UNUM, which specialises in disability insurance, to pay for the Council's new directory on the arts and disability, and £10,000 from IME, the library software specialists, which will enable arts companies seeking sponsorship to receive hard copy data from the Council's library.

Antony Thorncroft

Playing Sinatra

WAREHOUSE, CROYDON

Frank Sinatra comes to the Warehouse Theatre, Croydon as the absentee star of Bernard Kops' latest play, *Playing Sinatra*. This unpredictable and vicious tragi-comedy about psychosis builds slowly and collapses improbably. It makes no moral demands and offers no intellectual solutions – just like Ol' Blue Eyes himself. But it is moving and affecting nonetheless.

Norman is an agoraphobic psychotic who lives with his sister, Sandra, in their parents' Streatham house. He keeps food in the microwave and soft porn under the bed; she goes out to work, and comes home to his tantrums. Their querulous, introverted lives are crossed by Phillip, a tea-drinking mystic who looks like a spare part from *Zen and the Art of Motorcycle Maintenance* and arrives bearing a copy of the *I Ching*.

He turns out to be a con man intent on duping Sandra into financing an alternative meditation centre. The action implodes during Norman's violent birthday party when Sandra moves out and Phillip moves in. Behind it all – unbelievably – Norman finds Sinatra numbers and trivia for all occasions.

This is not really a play about Sinatra, but about people who are obsessed with Sinatra; as such, it makes a sad spectacle: the singing weasel croons his way into the recesses of their consciousness and sets up a shrine there.

Excepting Elvis, Sinatra is the singer of choice for vicarious livers – one cannot imagine Ella Fitzgerald or James Brown having the same effect. The play tests Norman's view of "Dr Frank" as the panacea for all chills; "without him", he says, "the world would be very dark."

Kops has always been good at knocking stereotypes out of kilter, and there are some fine moments when his characters speak out of context; for Sandra and Norman (nodding at Keats) Streatham is "all we know, it's all we need to know"; and "Sinatra people don't cause wars or commit acts of terrible violence", Norman confides in between the shocking outbursts as his delusions thicken and his home life disintegrates.

The direction (Ted Craig) is so good that the characters seem always to be naturally in place. The acting is first-rate throughout, with Ian Gelder (Norman), Susan Brown (Sandra) and Stefan Bednarczyk (Phillip) coaxing their implausible characters into believability.

Alan Lawrence's sound montage deserves high praise: he works Sinatra and sound effects into a consistent whole.

The overstuffed mature-bohemian set is apt, like the pattern of Norman's mind, full of stored-up junk and wall-to-wall Sinatra.

Andrew St George

INTERNATIONAL ARTS GUIDE

TODAY'S EVENTS

AMSTERDAM

Concertgebouw 20.15 Hartmut Haenchen conducts the Netherlands Philharmonic Orchestra in Mahler's Fourth Symphony and Blumine, plus Mozart's aria K538 with soprano Alexandra Coku, also Wed. Tomorrow: The Dubliners in concert. Thurs: Handel's Roman Vespers. Fri: Jean-Philippe Collard plays Tchaikovsky's First Piano Concerto. Sat: Valery Gergiev conducts Prokofiev. Sun: Verdi's Requiem (6718 345)
Muziektheater 20.00 Alberto Zedda conducts Dario Fo's production of Il barbiere di Siviglia. Runs till Oct 25, with next performances on Thurs and Sun. Fri and Sat: Dutch National Ballet (6255 455/ credit card bookings 6211 211)

BERLIN

MUSIC
Schauspielhaus 20.00 Gunter Wand conducts the Berlin Radio Symphony Orchestra in Bruckner's Fifth Symphony. Thurs: Moscow Chamber Orchestra. Fri: Rafael Frühbeck de Burgos conducts the Orchestra of the Deutsche Oper. Sat and Sun: Herbert Blomstedt conducts Bruckner's Sixth (East Berlin 2272 261)
Philharmonie Kammermusiksaal 20.00 George Malcolm conducts the Deutsche Kammerphilharmonie in a Mozart programme, with Andras Schiff soloist in Piano Concertos K491 and K449. Wed, Thurs, Fri, Sat: Semyon Bychkov conducts the Berlin Philharmonic Orchestra (West Berlin 2614 383)
Staatsoper unter den Linden 19.30 Zar und Zimmermann, comic opera by Lortzing. Tomorrow: Wolfgang Rennert conducts Salome. Wed and Fri: I vespri siciliani. Thurs: choreographies by Balanchine, William Forsythe and Marc Bogaerts. Sat: Der fliegende Holländer. Sun: Pelléas et Mélisande (East Berlin 2004 762)
THEATRE
East Berlin: this week's repertory at the Berliner Ensemble includes Schweyk tonight and Sun, Mother Courage tomorrow, Baal on Wed and a Kurt Weill evening on Sat (2827 712). The Deutsches Theater Kammerspiele has Ibsen's Ghosts tonight and a new single-evening adaptation of Shakespeare's Henry VI on Wed (2871 226). The Maxim Gorki Theater has Shakespeare's As You Like It tomorrow, George Tabori's Mein Kampf on Wed and Chekhov's Three Sisters on Fri (2082 748). The Volksbühne is showing Moliere's Le Malade imaginaire tomorrow and Sun, and a dramatisation of Bulgakov's The Master and Margarita on Thurs and Sat (2082 748).
West Berlin: the Schaubühne has Andrea Breth's new production of Arthur Schnitzler's The Lonely Road (1904) on Thurs and Sun, and Luc Bondy's production of The Winter's Tale on Sat (890023). The Schiller Theater repertory includes Schiller's Die Räuber on Fri and Goethe's Faust Part One on Sat (3195 236). The Renaissance Theater has Peter Shaffer's Amadeus directed by Gerhard Klingenberg, daily till Oct 29 (3124 202).

BOLOGNA

Teatro Communale 21.00 Shlomo Mintz is conductor and violin soloist in a Haydn and Brahms programme with the Israel Chamber Orchestra. Tomorrow and Wed: Ballet de Monte Carlo in choreographies by Roland Petit. Fri and Sat: Daniele Gatti conducts the Orchestra of the Teatro Communale in Mahler's First Symphony (529999)

CHICAGO

Lyric Opera 19.30 Bruno Bartoletti conducts Robert Carsen's production of Mefistofele, with Samuel Ramey in the title role, Aprile Millo as Margherita and Bruno Beccaria as Faust. Tomorrow and Fri: Barber's Antony and Cleopatra. Sat: Le nozze di Figaro (332 2244)

DRESDEN

Semperoper 20.00 An evening of chamber music with members of the Staatskapelle, including string quintets by Mozart. Tomorrow: Janacek's Osud. Thurs: Entführung. (4842 731)

LONDON

Coliseum 19.30 Guido Ajmone-Marsan conducts Jean-Claude Auvray's production of La bohème, with Vivian Tierney as Mimi, Joseph Evans as Roldolfo, Alan Opie as Marcello and Lesley Garrett as Musetta, also Thurs and Sat. Tomorrow, Wed and Fri: The Mikado (071-836 3161)
Royal Festival Hall 19.30 Klaus Tennstedt conducts the London Philharmonic in Wagner's Siegfried Idyll, Meistersinger overture and first act of Die Walküre, with soloists including John Tomlinson and Eva-Maria Bundschuh, repeated on Thurs. Tomorrow: Esa-Pekka Salonen and the Philharmonia continue their Debussy and Stravinsky series. Wed: Arturo Tamayo conducts the BBCSO. Sat: Tokyo Symphony Orchestra. Sun: Mariss Jansons conducts the London Philharmonic (071-928 8800)

MUNICH

Staatsoper 20.00 Erich Leinsdorf conducts the Bavarian State Orchestra in Beethoven's overture The Consecration of the House and the Second and Sixth Symphonies, repeated tomorrow. Wed and Fri: Cardillac. Thurs: L'Italiana in Algeri with Agnes Baltsa. Sat: Le nozze di Figaro. Sun: Cinderella (221316)
Gärtnerplatztheater 19.30 Boccaccio, opera by Suppé, also Fri. Tomorrow: Tiefland. Wed: Sondheim's Into the Woods. Thurs: A Midsummer Night's Dream ballet (201 6767)
Philharmonie 20.00 Choral concert by the Thomanerchor of Leipzig, with music by Bach, Bruckner, Brahms, Schubert and others. Tomorrow: Andras Schiff plays Mozart piano concerts with the Deutsche Kammerphilharmonie. Fri: John Eliot Gardiner conducts the North German Radio Symphony Orchestra in music by Mozart, Mendelssohn and Rakhmaninov. Sat: Neeme Järvi conducts the Gothenburg Symphony Orchestra (48098 614)
Herkulessaal der Residenz This week's concerts include a song recital by Carlo Bergonzi on Wed and a programme of Mozart piano concertos played by Paul Badura-Skoda on Sat (299901)
Deutsches Theater Starting tomorrow at 20.00, the all-black Alvin Alley American Dance Theater gives daily performances till Sun (593427)
Kammerspiele 19.30 Der blaue Boll, play by Ernst Barlach directed by Hans Lietzau, also Thurs. Tomorrow: Molière's Don Juan. Fri: Goethe's Stella directed by Thomas Langhoff (23721 328)
Prinzregententheater 19.30 Shakespeare's Coriolanus directed by Steve Berkoff, also Sun. Tomorrow and Sat: Ronald Harwood's play The Dresser (225754)

NEW YORK

Carnegie Hall 20.00 Murray Perahia plays three Mozart piano concertos with the Orpheus Chamber Orchestra. Sun: Lawrence Leighton Smith conducts the American Composers Orchestra in a new music programme, with Emanuel Ax piano soloist (247 7800). Tomorrow in Alice Tully Hall: Lucia Popp recital (721-6500)
Metropolitan Opera 20.00 James Levine conducts Don Giovanni with a cast including Ferruccio Furlanetto and Ruth Ann Swenson, also Sat. Tomorrow: Idomeneo. Wed and Sat matinee: Un ballo in maschera. Thurs: new production of La fanciulla del West with Domingo. Fri: Die Zauberflote (362 6000)

VIENNA

MUSIC AND DANCE
Staatsoper 20.30 La Sylphide. Tomorrow: Tosca. Wed and Sun: Abbado conducts Boris Godunov. Thurs: Il barbiere di Siviglia. Fri: Der Rosenkavalier. Sat: Le nozze di Figaro (51444 2960)
Volksoper 19.00 Karl Zeller's operetta Der Vogelhändler, also Fri. Tomorrow and Sat: La Cage aux Folles. Wed: Gräfin Mariza. Thurs: Der Freischütz. Sun: Tod in Wien, new Béjart ballet with music by Mozart (51444 3318)
Musikverein 19.30 Paul Freeman conducts the Chicago Sinfonietta in music by Bernstein, Gershwin, Copland and Barber. Wed, Thurs and Fri: Georges Prêtre conducts Mahler's Sixth (505 8190)
Konzerthaus 19.30 Dave Brubeck Quartet. Thurs: Atlanta Symphony Orchestra. Fri: Honegger's Le roi David. Sat and Sun: Vienna Symphony Orchestra plays Schumann and Berg (7124 6860)
THEATRE
This week's repertory at the Burgtheater includes The Merchant of Venice (tomorrow), Hugo von Hofmannsthal's Der Schwierige directed by Jürgen Flimm (Wed and Thurs) and Goethe's Clavigo directed by Claus Peymann (Fri, Sat, Sun). The Akademietheater repertory includes Othello on Fri and two weekend performances of Brecht's The Good Person of Sezchuan (51444 2218)
Telephone sales of tickets for the Staatsoper, Volksoper and Burgtheater are available worldwide for holders of credit cards by ringing Vienna 5131 513

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Monday October 7 1991

Industry and UK defences

SINCE THE dismantling of the Berlin Wall in November 1989 it has been clear that defence contractors in both east and west are inescapably threatened with secular decline. It is one of those rare instances where decline can be enthusiastically welcomed. But there remains a challenge for policy in reducing the human cost of shrinkage and in securing an orderly adjustment in a high-technology industry that accounts for a large proportion of manufacturing employment. There could be no better guide as to how not to tackle the job than the exhortation by former British Aerospace (BAe) chairman Sir Roland Smith in a letter to the Labour leader, Mr Neil Kinnock, leaked last week.

Sir Roland's shopping list, which was apparently despatched in June without the knowledge of other top executives at BAe, reflects precisely those priorities that help explain why the economic performance of countries with a high proportion of defence expenditure in GNP has tended to lag behind that of their less military competitors. Pleas for a protected home market, calls for costs to be given lower priority than "maintaining the long-term national manufacturing interest", demands for a closer relationship between industrialists and civil servants in the Ministry of Defence, plans for maximising exports to enhance the balance of payments – all the old arguments are there, but with a new twist, whereby the anti-competitive case is put primarily in terms of the sanctity of manufacturing instead of national security.

Economic drawbacks

By now even the British government, which traditionally spends more, relatively, on defence than its European counterparts, is conscious of the economic drawbacks. An awareness of the mismatch between the scale of costs and national markets has resulted in a more collaborative approach to defence projects within Europe, even if the dividends have been slow to materialise. At the same time the industry's tendency to generate much higher internal rates of inflation than those that prevail in the wider economy, largely thanks to the government's role as monopoly buyer, has caused the UK government to look to the US and Europe for important purchases.

Civilian spin-offs

The underlying economic case against putting a brake on the run-down is simply that defence spending involves both huge distortion and waste. Although there are civilian technological spin-offs, these are hard to quantify and probably diminishing. In practice, the private sector seems to have become more fertile of late in producing technological breakthroughs. The experience of the Soviet Union at one extreme and that of Germany and Japan at the other provides pragmatic support for the arguments of the sceptics.

Yet the disruption involved in running down the industry should not be minimised. Labour's answer is a defence diversification agency. Its critics can argue that picking diversification options is as luckless a task for government as any other variant of the picking winners game. In any case, can't the market be relied upon to accomplish the adjustment? The problem is that throughout Europe, the labour market's ability to generate new jobs has been poor and shows no signs of improvement; and British Aerospace's history of hasty diversification through acquisition suggests that Britain's hyperactive capital markets may be as much a snare as a help to adjustment.

Labour's only really valuable contribution to this debate is the emphasis it is placing upon training. Where the shortcomings of the takeover market are concerned, none of the main three parties has anything very attractive on offer.

After Kaifu

IT IS one of the paradoxes of modern Japan that a politician's public popularity bears little resemblance to his power. Equally, a politician may be disgraced, even forced from office by scandal, and yet continue to exert great influence behind closed doors.

The demise of Mr Toshiki Kaifu as prime minister and the assertion of authority by his predecessor but one, Mr Noboru Takeshita, represents only the latest example of this. A decade ago, Mr Zenko Suzuki was a reasonably popular, if bumbling, prime minister, while real power flowed from Mr Kakuei Tanaka, even though he was under indictment on bribery charges in the Lockheed affair.

Mr Kaifu's illusory strength was that he was clean while all about him were not. Mr Takeshita was forced out by the Recruit scandal; his successor, Mr Sosuke Uno, resigned after a mistress embarrassed him. More recently, two rising stars, Mr Ryutaro Hashimoto, the finance minister, and Mr Ichiro Ozawa, the ruling party's secretary general, have been variously waylaid.

But all these events never really changed the power structure inside the Liberal Democratic party. Nor, apart from a salutary scare in the Upper House elections in 1989, did it affect the electoral standing of the LDP.

The LDP functions on pure machine politics. Mr Kaifu came from the smallest and poorest of the five main factions, and thus could only survive on the sufferance of the others. His role, therefore, as prime minister was limited to the few prerogatives attached to his office. Conventionally, he tried to forge a personal relationship with the US president, but, after Iraq invaded Kuwait, he was reminded that even this could mean little. He fought for more assistance to the Gulf war effort than Mr Hashimoto, holder of the purse strings, was prepared immediately to authorise. The reason for his going last week – his own party's rejection of modest political reform - underlined the limits of his writ.

It follows that not too many hopes, or fears, should be vested in his successor. If it is a powerful faction leader, such as Mr Takeshita or his nominee, then a little more might be expected. But it will be recalled that long before he was undone by Recruit, he was increasingly opposed inside the LDP, and outside, because he rammed through the unpopular new sales tax.

It is, however, to be regretted that Mr Kaifu's departure is unlikely to lead to a generational change at the top. Whatever their personal merits, men like Mr Hashimoto and Mr Ozawa are more interested in the substance of policy and in Japan's external relations. That they will have to wait their turn may be a relief to Japan's bureaucrats, but it inhibits Japan's global political role.

But there is no evidence that the Japanese themselves are discontented with the way they are governed. The political system may be murky and prone to corruption, but it still delivers internally most of what is expected of it, which is more than can be said of many other democratic governments. At least it can be said of Mr Kaifu that he kept the Japanese show on the road.

ANC economics

AGAIN and again, the African National Congress fails to think realistically beyond apartheid to the daunting economic problems which lie ahead for South Africa.

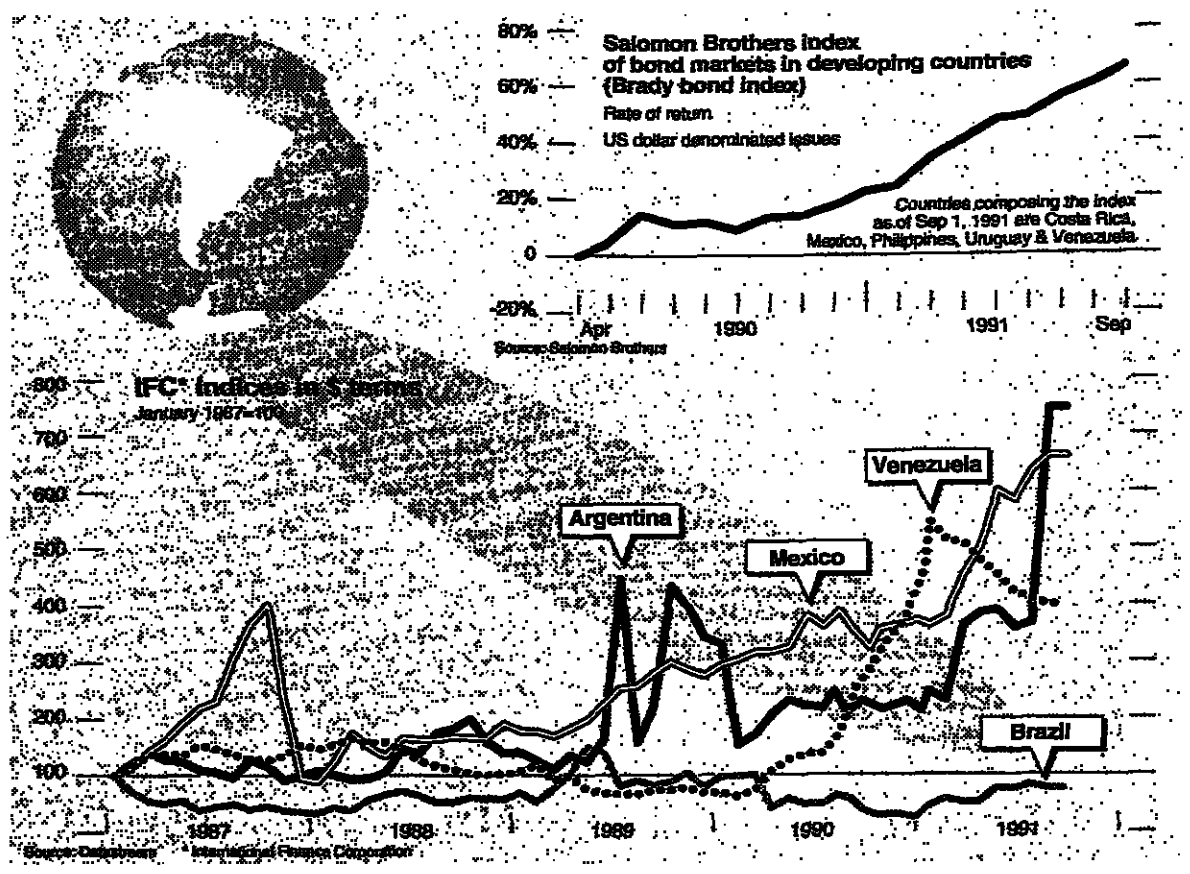
Over the past fortnight, ANC leaders have pledged allegiance to nationalisation, then withdrawn this pledge; threatened to renege on foreign loans, backtracked, and then threatened anew. Officials contradict each other, with scant regard for the damage done. Mr Nelson Mandela, the president, is among the worst offenders, reverting to the tired phrases of the 1955 Freedom Charter – promising to nationalise mines, banks and "monopoly industries".

Today, ANC officials meet US businessmen at Notre Dame University in Indiana to discuss investment in South Africa. In the privacy of the conference, ANC officials will downplay the rhetoric and investors will be assured that nationalisation will be used primarily to ensure supply of basic services such as health, transport, and electricity.

But they should remember that industrial nationalisation strikes a deep chord in the ANC. Afrikaner socialism made the volk rich, it is argued, and many ANC officials believe a post-apartheid state can do the same for blacks. It is time for ANC leaders to recognise the outmoded nature of this argument and set out a clear economic strategy. In so doing, they would dissipate some of the confusion which continues to frighten away potential investors.

Recession and poor returns have left investors looking for options. Latin America offers rich pickings, writes **Stephen Fidler**

Better off and back in fashion



Not for a decade have so many sharp-suited bankers headed from New York and London to Latin America. In less than two years, the region has moved out of the financial wilderness and back into fashion for the first time since the third world debt crisis broke in 1982.

Investors have been lured by the rich pickings to be made in Latin American stock and bond markets. Argentina's stock market, for example, has risen 291.2 per cent in dollar terms since the beginning of this year. Bonds issued by Mexico under a debt restructuring with foreign banks in March last year are among the most actively traded in the international bond markets; they have made returns for investors of 65 per cent since they were issued.

Portfolio investors are excited about Latin America partly because of the paltry returns on more conventional investments. With the English-speaking countries only now emerging from recession and growth slowing elsewhere, returns in the industrialised economies have been miserly. This is in stark contrast to the 1980s, when investors lost interest in the so-called developing emerging markets to pursue more exciting options in rich countries.

The revival has extended into direct investment: finance to build factories and establish businesses. According to the Organisation for Economic Co-operation and Development, flows of finance into Latin America from all private sources rose to almost \$24bn last year from \$15bn in 1989 and only \$6bn in 1986.

This change of heart over Latin America is not purely a reflection of the lack of investment alternatives. It is also linked to fundamental changes in the region over the past few years.

First, the 1989 debt initiative of the US Treasury Secretary, Mr Nicholas Brady, shifted the focus of international debt strategy. Previously it had been aimed at enabling debtor countries to grow out of their problems through further borrowings. The initiative envisaged, for the first time, banks making concessions to debtor countries to help ease their repayment schedules.

Mexico won the first such agreement from banks, completed in March last year. It marked a watershed for the country. Although the concessions were modest, they engendered the confidence of investors inside and outside the country.

The Brady initiative reflects a general shift of approach by the US, which no longer sees the region as a battleground for the cold war. American policy in Latin America (with the exception of Cuba) has in recent years placed more emphasis on economic partnership than on the political hue of Latin governments. Overwhelmingly, these governments are now elected and military dictatorship a rarity, in contrast with a decade ago.

Most important for investors has been the burial of the old state-dominated model of economic development in Latin America, which is almost universally seen as having failed.

State enterprises are being sold to private investors across the continent, economies are being opened up to the outside world as import tariffs are lowered, governments are making serious efforts to keep fiscal deficits under control, and the role of the market recognised. The climate for investment in many countries has thus been improved radically.

The transition is furthest advanced in Mexico and Chile. Mr Rudy Dornbusch, economics professor at Massachusetts Institute of Technology, says: "Mexico is perceived by the world capital market as the next Spain. In fact, Mexico may be doing better."

Research by Wall Street and City of London investment banks on the region have proliferated. In an assessment last month of sovereign bonds issued by developing countries, Salomon Brothers says that bonds issued by Chile and Mexico should soon lose their "junk bond" stigma.

Says Mr Paul Luke of Chartered WestLB, a London-based merchant banking group: "One is seeing a gradual transformation of Latin America into an investment-grade region of the world." Salomon concurs: "We believe that Chile already warrants an investment-grade credit rating" – meaning that its bonds are suitable purchases for conservative investors in the US – "while Mexico is close behind; Venezuela deserves mention in this category. Smaller countries that have made advances include Uruguay and Costa Rica. Colombia remains sound from an economic perspective."

Unlike Mexico, Venezuela and Chile, neither Argentina nor Brazil has reached agreement with bank creditors. None the less, the money is flowing in.

Brazilian officials estimate that in the first seven months of this year, inflows to the country totalled \$6bn. They reckon that by the end of the year the capital influx will amount to \$10bn. Both Argentina and Brazil have been able to raise funds on the Eurobond market. Funds are flooding into the thin stock markets of both countries on the premise that if the economies experience an upturn those in early will make the killings.

A Eurobond for Argentina brought to market last month by J P Morgan, the New York bank, was greeted so enthusiastically that it was eventually expanded from \$100m to \$300m. Although the cost to Argentina was high, more than 11 per cent for one-year money, raising money in this way would have been unthinkable even a year ago.

The investment inflow is easing worries in Latin America that the emerging democracies of eastern Europe will divert funds away from the region. Foreign institutional investors say Latin America offers a number of advantages over Asia and east Europe.

- The rules that limit foreign equity investment in many emerging Asian markets, such as South Korea and Taiwan – for example, to country funds or convertible bonds issued by a few companies – do not apply in many countries in Latin America.

Most important for investors has been the burial of the old state-dominated model of economic development

- There is also a wealth of investment vehicles. Even the bank debt that created the debt crisis can be bought and sold by investors – usually at significant discounts to face value – in an active secondary market. Mexico's privatisation programme, culminating in the sell-off of the telephone monopoly which raised more than \$2bn from international markets, has stimulated foreign equity investment and has been followed by similar strategies elsewhere in the region. Mexican companies are lining up to follow earlier successes in raising equity finance from foreign markets; and some have also successfully issued Eurobonds.
- More adventurous investors have also been exploring Latin America's domestic capital markets, markets which in other parts of the world are often closed to outsiders or simply do not exist, as in eastern Europe.
- Many Latin American economies (and therefore markets) have another advantage over eastern Europe – the potential for a return of flight capital, money salted overseas in part to avoid the wealth-destroying economic policies of successive governments.

Flight capital from Mexico, estimated at its peak to have reached \$60bn in the mid-1980s, is returning home. Countries such as Argentina (though not Brazil, where capital flight was a lesser problem), thus have a huge pool of potential investment funds. Their return would provide an acid test of confidence in economic policy.

The OECD survey states: "The recent Mexican (and Chilean) experiments suggest that the potential for a smooth use of flight capital to finance or refinance Latin America is considerable."

Despite the numerous factors that have attracted investors to Latin America recently, there are those who worry that the excitement may have got out of hand.

Investors have done well out of Mexico in the past 18 months. But investment-grade status for Mexico may perversely make Mexican government paper more difficult to sell. Some investors, particularly in the bond market, have already lost interest in Mexican bonds as their yields have fallen both because of the country's shrinking risk premium and lower US interest rates. In 1989, one of the first of the new Mexican wave of Eurobonds was brought to market at more than 9 percentage points over benchmark US Treasury bonds; now Mexico raises money at 2½ points over US Treasuries.

"I honestly think that we weren't that bad and we're not that good," said Mr Pedro Aspe, the Mexican finance minister. Recently, the ministry has applied the brake to foreign borrowing by private businesses and public enterprises. With Mexican bonds becoming a safer but duller investment, investors are already seeking more exciting returns elsewhere. Mr Lawrence Brainard of Goldman Sachs, the US investment bank, says: "Everybody's looking for the next Mexico but some fundamental questions are not being asked."

The central question investors should ask before buying the bonds of a government or government agency, says Mr Brainard, is whether the government has its budget deficit in check. Apart from Mexico and Chile, most governments fail this test.

Profound questions also remain on the region's two economic giants: Argentina and Brazil. Investors may be talking about what is called "the end of risk" in Argentina following the current success of the government's economic programme. But while that has secured a rare six months of domestic economic stability, Mexico's economic turnround took eight years to reach its present stage. Brazil is being more conciliatory toward foreign bank creditors, but inflation is rising alarmingly – to an expected 19 per cent this month.

"In Mexico, we are seeing the rewards for eight years of economic stabilisation. In Argentina and Brazil, it's quite different. People there are playing very short-term games and they won't always leave with their skins," says Mr Dornbusch of MIT.

J P Morgan estimates that 60 per cent of the money that has flowed into Mexico is short-term funding. The money in other Latin American markets is even more volatile.

There is also a fear that these volatile funds could push economic policy off-course. In Brazil, some officials believe there is a danger of a stock market collapse which would be seen as being caused by foreign investors. The market fell 13.5 per cent in dollar terms last month, mainly in response to the government's decision to postpone the long-awaited privatisation of Usiminas, the steep group, until October 15, though the 17 per cent devaluation of the cruzeiro will not have helped. This could lead to an adverse reaction in the Brazilian legislature; a reversal of the moves made so far to improve the environment for foreign investors.

None the less, if the investment tide is going to turn, short-term capital will always be the first to arrive. The fears that another debt crisis is in the making should be tempered by the knowledge that the banks are not making huge loans at floating interest rates, as they were in the 1970s, and that a great proportion of the inflow is equity investment.

While the financial world was obsessed with the debt crisis in the 1980s, governments in Latin America would complain that their efforts at economic adjustment never met any economic benefits. Now, for the first time since the early 1970s – a period which incorporates the decade of the debt crisis and the decade which brought it about – investors have proved themselves willing to commit funds to developing countries where they perceive economic policy is good.

Investment spurs economic growth, which in turn makes electors feel better off. For the first time in 20 years, governments in Latin America thus have a real incentive to improve the way their economies are run.

Asylum granted

■ Glasnost is evidently infiltrating Britain's Conservative party via the exhibition tied to its conference in Blackpool this week. A jubilant young lobbyist from the Refugee Council, no less, was agog to hear she is not only being allowed to set up stall there, but at a discount to boot.

The Tory conference exhibition is traditionally dominated by commercial outfits, unlike Labour's equivalent where the likes of the Nicaragua Solidarity Campaign jostle for space with companies such as British Nuclear Fuels.

True, the Spastics Society managed to penetrate the Tory event two years ago. But in return for its discount-price stall, the conference committee made it promise not to display anything controversial enough to upset ministers. "They wanted to read all the literature we had on display," recalled a member of the society which is there again this time at a cost of about £3,000.

On the other hand, the League Against Cruel Sports is still being shut out. "They say that if we are allowed a stand then they'll have to invite the British Field Sports Society too," said Angela Smith, the league's exhausted representative at last week's Labour conference in Brighton where its stall had an overwhelming response.

Air brush

■ Lord King's BA is undergoing a revival of its pre-privatisation nickname "Bloody Awful" in Toulouse, where chiefs of the European consortium Airbus are still fuming over the loss of a £4bn-plus British Airways aircraft contract to arch rivals Boeing.

Jean Pierson, chairman of the consortium which felt it had a good chance of clinching its first big sale to BA, has sent a memo to Sir Leon Brittan.

OBSERVER

It calls on the European Commission to investigate the Boeing deal and the reasons why Airbus has been excluded from the last five rounds of BA's new aircraft acquisitions.

But the bad feeling runs even deeper. Airbus has now imposed a virtual ban on BA flights for its 1,400 employees.

The consortium confirms it has reinforced its internal travel regulations which encourage employees to fly, whenever possible, on an airline which buys Airbus aircraft. This appears to have had some impact on the passenger load factor of BA flights from Toulouse to London, to the benefit of Dan Air and Air France which compete on the much travelled route.

Forewarned

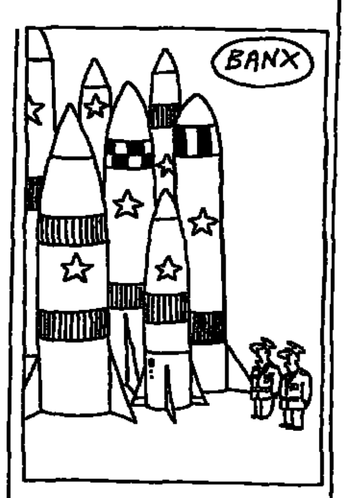
■ Boxing must be top of most peoples' lists of dangerous sports after the sad fate of Michael Watson, but according to the Consumers' Association there is another sport just as life-threatening: golf.

Prince William, it seems, is not alone in being hit over the head with a golf club. In fact, it's rather common. The association cites a British Medical Journal report which shows that four out of 10 head injuries to children during sporting activity resulted from blows by golf clubs or balls. Most occurred when a child got in the way of another's backswing.

"In the hands of children playing unsupervised, golf clubs are potentially lethal weapons," the report adds.

Mould broken

■ Barclays, the biggest UK clearing bank, has broken a mould dating from the 1970s by deciding not to appoint a new group economic adviser to replace Professor Alan Budd, who last month became chief economic adviser at the Treasury.



"I know – let's privatise them."

Instead the bank's current head of economics Alan Davies, who is in charge of a team of about 50, is being promoted to a new post. And although it is roughly equivalent to the one held by Prof Budd for the past three years, Davies will pointedly be called chief economist rather than economic adviser.

The plan is that he and his team will continue to focus on nitty-gritty financial issues such as working out currency movements and which business areas appear promising for Barclays to move into. Davies will not have the high public profile and access to the board enjoyed by Budd and his predecessor Professor Harold Rose, who had the job between 1975 and 1988.

It seems the bank thought long and hard about the issue before deciding an *eminence grise* from the academic world to follow in the footsteps of Budd and Rose would not necessarily provide better value than a workaday economist in the Alan Davies mould. A second consideration was that a suitable person failed to spring to the Barclays board's collective mind.

A third, and perhaps the most telling, was the opportunity to cut the bank's salary bill by £100,000 or so.

Witty style

■ Observer can now report on its August competition to dream up a catchy slogan for Birmingham, whose own bigwigs were stumped for ideas.

No marks for the many readers who hit on the rather obvious phrase – or variations of – "Brum, Brum, Birmingham!"; such onomatopoeic puns, hinting at the second city's links with the motor car industry, skidded off the tracks.

Nor were the straight-laced offerings, such as "Birmingham: Centre of Britain", sufficiently zingy to grab much regard.

But our judgment panel liked the three-tier offerings of Gaynor de Wit (whose surname alone must guarantee something), of Imperial College's management school.

She offered "Birmingham's Blooming Brilliant", for "marketing style"; "Yummy Brummy", under her own heading of "tacky/gimmicky"; and finally, what she calls "the more honest" – an opinion Observer does not necessarily share, but which many hapless motorists might – "Bypass motorway? Good idea."

A bottle of champagne is trundling on its way.

Crusty

■ Passing a lunchbar whose window was emblazoned *£100 to anyone naming a sandwich filling we can't provide*, a City wiseacre marched in and asked: "May I have a giraffe's tongue sandwich, please?"

Nodding, the counter attendant went into the storeroom, only to return moments later saying: "Sorry – no bread."

Mr Gordon Brown's punchy electioneering performance at Brighton last week was meat and drink to Labour party delegates sniffing victory in the seaside air. For Mr Peter Lilley, trade and industry secretary, his Labour shadow's act will be a hard one to follow when he faces the Conservative party's rank and file at Blackpool this week.

While Mr Brown's critics claim he is heavy on rhetoric and light on real ability, even they have to concede he has made his mark. Mr Lilley, often regarded as "too cerebral" and unimpressive in demonstrating basic political skills, cannot yet claim to have done the same.

In recent weeks, he has toured the country, aiming to demonstrate that the government has a coherent industrial policy. He has not always been given an easy ride.

During a private session with Newcastle businessmen, he maintained a fixed smile while being told that the business community in the north east is sufficiently brassed off with the Tories that it views the prospect of a Labour government with equanimity.

Many top-ranking industrialists say they have been alienated by a traditionally supportive government. They deny that they want direct government intervention, but blame the Tories for tilting the playing field against them with a prolonged period of high interest rates, caused by the government's economic mismanagement.

In the trough of recession, they look to the industry department for, at least, a degree of understanding, which Mr Lilley is often accused of failing to deliver.

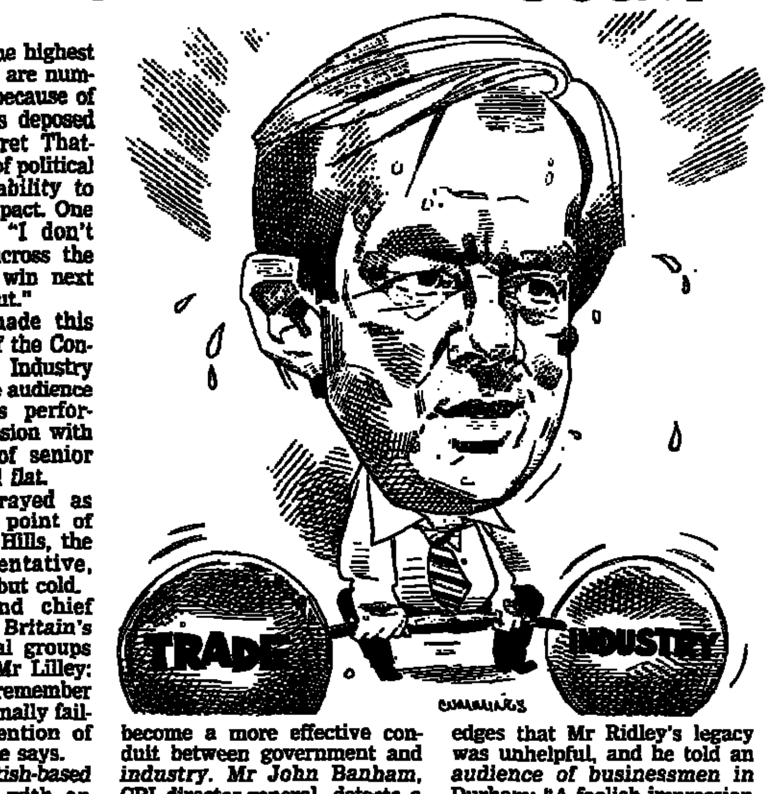
The result is that a man widely acknowledged as one of the cabinet's brightest intellects, is being criticised not only for the poor state of the economy but also because of his own shortcomings.

In the 42 expeditions he has made from his Victoria Street, London, offices since he arrived from the Treasury in July 1990, Mr Lilley has rarely missed an opportunity to proclaim himself a big fan of manufacturing industry. But after 14 months, leading manufacturers remain reluctant to return the compliment. An MP for only eight of his 48 years and with a political ranking far weightier than his experience, Mr Lilley could never have expected an easy ride at Westminster. The seventh man to run the accident-prone Department of Trade and Industry since its formation in 1983, he has rarely performed well.

Some cabinet colleagues believe his days in the highest ranks of government are numbered, not so much because of any affinity with his deposed mentor, Mrs Margaret Thatcher, but as a result of political naïvety and his inability to make much of an impact. One colleague confides: "I don't expect to see him across the cabinet table if we win next time. He's got no clout."

Peter Lilley has come under fire for his personality and his policies, says **Michael Cassell**

Time for minister to show his mettle



An address he made this year to the council of the Confederation of British Industry (CBI) left many in the audience disappointed in his performance. A private session with a low-profile club of senior industrialists also fell flat.

He is often portrayed as being blunt to the point of rudeness. Mrs Carla Hills, the US trade representative, believes he is clever but cold.

The chairman and chief executive of one of Britain's best-known industrial groups recently dined with Mr Lilley: "It is the only time I remember a cabinet minister signally failing to hold the attention of those around him," he says.

The head of a British-based international group with an annual turnover in excess of £6bn sees him as "a man of unbelievable arrogance and extraordinarily rigid views.

"He has a very low opinion of British manufacturers, whom he regards either as whingers or in search of a hand-out."

Those close to him brush off such personal criticisms, although some acknowledge he was slow off the mark at the DTI. According to one aide: "He has no 'showbiz' about him. But he can be terrific when he unfreezes and he is learning to relax more as he grows into the job."

Another close associate explains: "He fights with facts and tells it straight. If he hears a false argument he says so. He is accused of not standing up for industry and the DTI in cabinet but the big fight is not his style; he can be very dogged."

The CBI has, along with the Labour party, regularly accused the government of underestimating the pivotal role of manufacturing industry and called for the DTI to become a more effective conduit between government and industry. Mr John Banham, CBI director-general, detects a public conversion: "I think we have seen something of a sea change in the government's overall approach. The signs are encouraging."

Politicians are traditionally easy prey for businessmen who say success at Westminster counts for little in the world of commerce. Criticism may also reflect simple frustration at government refusal to treat industry more generously and sympathetically.

A former trade and industry secretary says industrialists, especially when times are bad, "want to let off steam. The department has very little money, so you often have to rely on social and political skills to see you through. Peter's heart is in the right place but he is terribly shy and his presentation lets him down."

Even his critics have to acknowledge that Mr Lilley faces a daunting challenge at the DTI. His predecessor, Mr Nicholas Ridley, did not help, leaving low morale and a political vacuum.

Mr Lilley privately acknowledges that Mr Ridley's legacy was unhelpful, and he told an audience of businessmen in Durham: "A foolish impression was created that we were not interested in manufacturing industry. That was wrong."

But Mr Lilley cannot escape criticism for some of his own recent actions. He was accused of being woefully indecisive when first formulating his public stance on a possible Hanson bid for ICI. He was also caught off-guard in the early days of the row over the alleged export of nuclear weapons materials to Iraq.

When he took the job, Mr Lilley told officials he wanted to be judged by what he did. By April this year, he was publicly setting out his priorities and his philosophy for industrial success.

He celebrates the demise of the DTI's sponsorship role, in which strategic industries won state support. He views tax incentives for business more as distortions and is unmoved by calls to provide allowances for capital investment.

He talks, instead, of continuing to minimise the overall burden of corporate taxes and stresses the need for a broader approach intended to foster competition and economic growth. The DTI, he believes, has a role in providing advisory and support services which make that objective achievable.

Mr Lilley carries two banners in his personal crusade. He wants to encourage a change in corporate culture which prizes innovation – "the source of future economic growth and success" – and which breaks down the barriers between the research base and industry. He also plugs away at the need to boost exports and has fronted a series of successful UK exporting initiatives.

Another favourite theme is the need to create an effective, two-way channel of communication between government and industry.

Mr Lilley is generally regarded as having done a useful job in seeing through proposals to end the telecommunications duopoly and in subsequently helping to sort out the infighting between BT and potential rivals over the terms on which they will compete.

He has, in addition, proved himself capable in handling the trade element of his portfolio. A talk on the challenges and complexities of the General Agreement on Tariffs and Trade to the Institute of Directors drew praise.

Some observers at least believe Mr Lilley is beginning to emerge as a weightier and more receptive figure.

The chairman of a large industrial materials group says he is making a big effort to step up dialogue with the business community: "I can see why he was a good Treasury man but he needs more time to prove he can mix it with industry."

Mr Colin Hope, chairman of T&N, the automotive components and engineering group, believes Mr Lilley is trying to atone for the sins of his predecessors. "He was slow off the mark but a useful dialogue is starting to take place."

During last year's party leadership contest, Mr Lilley joked with Mr Michael Heseltine, contender for the Tory crown and a man who had consistently called for more continuity at the DTI. His job, Mr Lilley assumed, would be secure under Mr Heseltine.

In the event, the leadership went elsewhere, but Mr Lilley remained in place. An end to the recession may make his lot happier. But he will still have to convince manufacturing industry that it is prized by the government. If he cannot, he is only too well aware that Mr Gordon Brown and his colleagues are waiting in the wings.

BOOK REVIEW

Blue-blood mystique

CAZENOVE & CO: A HISTORY
By David Kynaston
Batsford (October 17), £30

Perhaps Sir Antony Hornby, a senior partner of Cazenove in the 1960s, put it best. "You see more of your partners than you see of your wife, and you should therefore pick them as carefully."

It is hard to see how the venerable City stockbroking firm can still be there, but it is. Powerful, secretive, feared, admired but probably not much loved, it should have been swept away by the Stock Exchange's Big Bang, but if anything it has strengthened its position as London's top corporate broker. Only the forthcoming prosecution of a key partner, David Mayhew, in the Guinness Three trial in connection with share price manipulation threatens the peace of mind of Number 12 Tokenhouse Yard.

The refinancing which Cazenove obtained at the time of Big Bang says a lot about its mystique, which borders on arrogance. A group of leading investment institutions subscribed £32m in subordinated loan stock on which the return was linked to the firm's profits. But they were offered no sight of the balance sheet or the profit and loss account. It was a matter of trust.

Cazenove epitomises the old City style. It will "look after" its clients so long as the clients are loyal in return. Accept a bad deal, and it will feed you a juicy one before too long. But as David Kynaston describes it, the team of blue-blooded salesmen at Cazenove despairs of the so-called "cherry pickers", clients who assess each underwriting offer on its individual merits. They are not struck off the list. Yet they "might be somewhat less well favoured in future issues". A lot lies behind that "somewhat".

The selling team has much preferred to deal with friendly funds, like Henderson Administration which became linked through a merger of family firms in 1932, or the WH Smith pension fund, a Hornby family connection. There was no need to ring back, they would just be put down for an allocation. That was what placing power was all about.

The Cazenoves were originally a Huguenot family of merchants, several of whom moved from Geneva to London in the 18th century. Philip Cazenove founded the stockbroking firm in 1823, and during the next century its reputation in corporate broking was established. An early company it floated was the Metropolitan District Railway in 1865.


John Kemp-Welch (top) and Anthony Forbes; Cazenove senior partners

There was always a Cazenove family connection, but it rarely dominated. Outsiders such as Claud Serocold and Charles Micklem built the firm's reputation in the crucial interwar years when it advanced to the top of the broking league table. It floated Ford Motors in 1928; 2.8m shares at £1 were divided among favoured clients and they soon went to £3. "Our friends were pleased," said a partner later, but the seeds were laid of complaints about cosy placings.

The rough, tough "Caz" style persisted after the Second World War, emerging for example in 1968 when American Tobacco bought into Gallaher in what would now be called a dawn raid. It was, said the newspapers, unfair to small investors. But Sir Antony Hornby expressed a different view in an internal memorandum. "Equality among investors is an illusion," he wrote. "We are often disappointed in missing a line of shares in the market. Someone has bought them first. He made up his mind quicker or had a better broker. This is not unfair."

Crucially, however, single-mindedness was combined with restraint. In the late 1920s Cazenove held back from many of the dubious issues which were being floated. Clarence Hatry, who unwisely showed up with a prospectus already printed with the Cazenove name, was "sent packing".

This corporate history is full of details of deals done, and of partners who came and went, but the running of the firm remains something of a mystery. Who picked the senior partners, and how? Those choices appear to have been fundamental in maintaining the firm's style over the years.

Again, given that recruitment was thoroughly nepotistic ("he secured a berth at Cazenove's via Bromley-Martin, a first cousin of his mother's" is a typical recruitment story) how was quality maintained in the way that Hornby suggested? The decision-taking process is not explained, although apparently Charles Micklem bluntly told David Cazenove in 1946 he would not make partner (wrongly, it turned out).

It seems odd that such a secretive firm (which has largely avoided contact with journalists) should publish such a book, let alone ahead of the Mayhew case. The explanation seems to be that this is a 10-year project, started by the late Raymond Cope and taken up by David Kynaston in 1988.

The issues raised by the Guinness charges are naturally not dealt with, but it is characteristic of the firm that it should have stood firmly behind its accused partner. Whether the trial will show that Cazenove has not, after all, smoothly achieved the transition from the old ways of the City to the new, only time will tell.

Barry Riley

LETTERS

Supporting the industrial base

From Dr R C Whelan.

Sir, Comments by Peter Lilley, trade and industry secretary ("Lilley urges banks to help innovation", October 3) come at an appropriate time when many innovative companies are under pressure.

Venture capital, the most innovation-supporting part of the financial sector, has abandoned early start-up funding of new companies, particularly those exploiting new science and technology. This "sector retreat" has allowed a further gap to open up between viable small and medium-sized companies and entrepreneurial individuals who create them. The finance and service sector has to realise that they depend for their long-term survival on a dynamic industrial base and that they have to deploy their considerable skills to assist in its formation.

The future of London as Europe's leading financial centre should not be taken for granted in a broader Europe.

R C Whelan,
chief executive,
Centre for Exploitation of Science and Technology,
5 Berners Road, London N1

Filling gap

From Mr Malcolm Craig.

Sir, Your article, "Big banks agree plan for spring flotation of 3i" (October 3), contains one myth. While it is true that 3i Group was set up in 1945, it was not designed to fill the Macmillan Gap, which Lord Macmillan had identified in 1931. The 18 years which elapsed between the two events render this connection unlikely. Indeed, Lord Piercy, the first chairman of ICFC (Industrial & Commercial Finance Corporation, which later merged with Finance for Indnstry) told me in the mid-1960s that he had used the Macmillan Gap (a shortage of long-term capital for private companies of between £5,000 and £20,000) as a means of publicising ICFC.

ICFC and FCI were both established as down-to-earth measures for post-war reconstruction, resulting from Lord [illegible]erson's Post War Reconstruction Committee, which [illegible] its findings in 1944.

[illegible]raig,
[illegible]nuare.

BT telepoint freeze is another UK failure to manage innovation

From Mr Geoffrey Vincent.

Sir, On the same day that France Telecom announced the opening of its trial telepoint service (Pointel) in Strasbourg, British Telecom's Phonepoint consortium announced ("BT rings off on Britain's last telepoint operation", October 2) that it was freezing plans to relaunch its telepoint service in the UK – on the grounds that it is "not economically viable". As the French paper La Tribune says: Is this an example of British humour?

Phonepoint is the third telepoint operator to withdraw from the market-place in recent weeks. Of course telepoint – or digital cordless telecommunications, which is the generic name for the technology of which the UK's telepoint services are the first, rather incoherent stirrings – could simply be a bad idea. But some 15 to 20 countries around the world are sufficiently interested to be experimenting with a variety of concepts based on this technology, and on the CT2 standard originally developed in the UK. Recent analysis suggests that digital cordless technology, implemented in a rather different way from the UK's original telepoint offerings, is the best hope of enabling economically viable competition in local loop telephony – a key policy objective of regulators the world over. But the UK market is poised to say, like the proverbial British tourist faced with unfamiliar or foreign food, "tried it once – didn't like it".

Japan and France understand the need for a nursery environment in which new concepts and new companies can grow and experiment without being trampled on by the forces of the mature market place. This needs co-operation between government and industry, to set up – with a degree of interaction and trial and error – a stable framework within which strong competition can take place.

Is telepoint just another manifestation of the peculiar British talent for coming up with ideas which others exploit? A recent survey by Japan's Ministry of International Trade and Industry indicated that of the new concepts that have been important in the 20th century, 51 per cent originated from the UK. Regrettably for the British economy, most of this 51 per cent have been made into successful products and businesses elsewhere.

The UK must learn what it takes to be successful elsewhere; and tackle some of the key issues in what look suspiciously like not isolated accidents, but systematic failures in the UK's management of technological innovation.

Geoffrey Vincent,
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Currency board would establish sound rouble

From Professors Steve Hanke and Alan Walters.

Sir, Mr Charles Bean and his colleagues from the London School of Economics remind us that the rouble is failing to serve as a store of value, medium of exchange or a unit of account, and that, with a malfunctioning currency, the Soviet Union cannot make a transition to a market economy ("Soviet republics should supplement rouble with hard foreign currency", October 1). Those observations are undebatable.

The authors also conclude that the Soviet republics should supplement the rouble with low-inflation foreign currencies, and that, since the Soviets do not have access to hard currencies, the west should assist the Soviets by supplying them with hard currencies. We question the accuracy and wisdom of those conclusions. Soviet citizens have begun to "dollarise" the economy, substituting hard currencies for the near-worthless rouble. Indeed, we estimate that private holdings of foreign currencies exceed rouble holdings by a large margin, with the real value of the foreign currencies held in private hands equal to about $10bn and the real value of the rouble supply equal to about $5bn.

Although that dollarisation will assist the Soviets in their quest to establish markets, it is costly and is a second-best solution. It is costly because to obtain bits of paper produced by western central banks at virtually no cost, Soviets must give up real goods and services. Hence, dollarisation generates a perverse form of foreign aid flowing from the Soviet Union to the west.

To establish a sound rouble and to stop dollarisation, the Soviet republics should adopt a best solution: the currency board system. We discussed this in the FT in 1990 ("Reform begins with a currency board", February 21). Under that system there would not be a central bank. Instead, a currency board would issue notes and coins convertible into a foreign reserve currency at a fixed rate. As reserves, a board would hold high-quality, interest-bearing securities denominated in a reserve currency. Reserves would be set at 100 per cent of its notes and coins in circulation. At current liquidity levels, that implies about $5bn in reserves. If the Soviets converted gold stocks, foreign exchange reserves and assets of the outlawed Communist Party into a reserve currency and transfer it to a currency board, adequate reserves could be obtained without foreign assistance.

A currency reform along these lines would earn seignorage for Soviets rather than western central banks because the costs of issuing a currency board's liabilities would be much less than the returns received on its assets. Moreover, a currency board would create a sound, convertible currency within weeks. Indeed, we discovered that John Maynard Keynes engineered the establishment of a successful currency board in north Russia in 1918, and that it began issuing sterling-backed roubles only 11 weeks after Keynes submitted his detailed proposal.

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FINANCIAL TIMES
Monday October 7 1991

EC divided over future plans for defence

By David Buchan in Utrecht

FRANCE enlisted the support of Germany yesterday in mounting a counter-offensive against Anglo-Italian plans to set European defence policy within the context of Nato.

After a weekend meeting on political union, Mr Douglas Hurd, UK foreign secretary, claimed the Anglo-Italian plan had excited "a lot of interest".

However, Mr Roland Dumas, French foreign minister, said he had invited Mr Hans-Dietrich Genscher, his German counterpart, and any like-minded ministers to Paris on Friday to discuss the EC's future defence role.

The Dutch presidency was angry that the French had assumed the right to convene a meeting on EC policy.

Mr Dumas said: "We want to pursue discussions in co-operation with the representatives of other member states who, like us, want to make the Maastricht summit [in December] the concluding meeting" on political union. For the moment, only Germany and Spain seem certain to attend the Paris meeting.

Mr Francisco Fernandez Ordonez, Spain's foreign minister, said the Anglo-Italian plan marked "a clear advance for the UK" in accepting the longer-term perspective of EC defence policy. Mr Hurd denied he was troubled about the prospect of a French-led cabal on the defence issue.

The possibility of marrying the defence plans into an acceptable compromise at Maastricht was rejected by Mr Dumas, who said it would be "like mixing fire and water".

Mr Jacques Delors, Commission president, suggested that the Anglo-Italian plan – which stresses subcontracting defence to the Western European Union with equal links to the EC and Nato – could be viewed as a short-term solution. The Franco-German emphasis on eventual absorption of the WEU's defence function into the EC might be the longer-term answer, he said.

Mr Hans van den Broek, Dutch foreign minister and current EC president, said: "All now accept that integration will never be complete until some defence element is introduced into our common policies."

Mr Hurd argued strongly for the EC to maintain its present informal style of foreign policy co-operation, which has been holding up well under the strain of Yugoslav and other crises.

But Mr Hurd failed to stem the shift of opinion among most EC states towards taking low-level Community foreign policy decisions by majority vote. France joined Germany in calling for majority voting.

A number of states believe that, as in internal market legislation, few foreign policy decisions would be taken by majority vote, but its very threat would help the Twelve to reach consensus quicker.

Denmark and Ireland are also against votes on foreign policy. Portugal said it could accept majority verdicts by at least eight states, if each country had an equal vote.

Soviet arms cuts, Page 2

UK Conservatives seek to regain political initiative

SENIOR British Conservatives yesterday launched a political onslaught on the opposition Labour party to boost morale ahead of the Tories annual conference which begins tomorrow, write Ivo Dawnay, Michael Smith, and Edward Balls

But the counter offensive suffered a setback in two new opinion polls which confirmed that Labour's own widely-acclaimed conference had given a strong boost to the opposition.

An NOP poll, conducted on Friday and Saturday for the Independent on Sunday, showed Labour seven per cent in the lead with 46 points, the Tories on 39 points and the Liberal Democrats on 13 points.

A more comprehensive Press Association/ICM poll of 10,000 voters, conducted both before and after Mr Kinnock's keynote speech last Tuesday, gave a narrow margin with Labour on 42 points, the Tories on 40, and the Liberal Democrats on 13.

Prime Minister John Major has ruled out a November general election but must go to the nation before July 1992.

The day-long assault, channelled through a series of radio and television interviews, was aimed at countering Labour charges that the Tories would "privatise" the National Health Service.

Meanwhile the average level of manufacturing pay settlements fell to 5.5 per cent in the third quarter of this year, the lowest level in more than three years, according to figures published by the Confederation of British Industry, the employers' association.

The decrease, which follows the steepest decline for a decade in the first half of this year, provided a fillip for the government in the week that it is expected to announce a further fall in headline inflation to an annual rate of 4 per cent.

In addition a survey of 1,400 managing directors and financial directors, conducted by Dun and Bradstreet the business information company, found that businesses are most optimistic about their prospects in the North-West and the eastern regions of the UK.

Cold sea wind chills Britain's golden mile

The next UK election hinges on recovery. **Rachel Johnson** tests the water in Blackpool

WELCOME to Blackpool, home of the seaside Golden Mile, and for the next week, Britain's ruling Conservative party.

In the Promenade Café, there are just three tea drinkers at lunchtime, watching the wind whip the grey sea into beige foam outside the window. Harry, the proprietor, his partner John, and the waitress.

At the tail-end of the worst season he can remember for 30 years, Harry is blunt.

The recession rollercoaster has come to Blackpool, Britain's biggest, brashest and cheapest working-class resort. As the Tory party meets this week in the town for its annual conference, the soundbites of recovery and growth will fall on deaf ears up and down the famous promenade.

Many wish the event was elsewhere – down in the south of England where trade can better weather a week's interruption. "We're never busy with the Tories or Labour, only the Liberal Democrats – they're the ones who have to pay their way," says Harry.

Even if Harry's café does pick up conference trade this year, neither the Conservatives nor promises of recovery would do much to fill the 180,000 beds that Blackpool's 3,500 hotels, guest houses and holiday flatlets have to sell every night.

Every room in the Waterside Private Hotel, despite its bargain offer of double room ensuite, slot TV, bed, breakfast and evening meal for an astonishing £16 per head ($28), remained empty in what should have been the busiest weekend of the year.

In almost every B&B (Bed and Breakfast) along the "prom" and the parallel Dickson Road, the vacancy signs flash red. Landladies are busy pinning up posters for "Pricebuster November Breaks", with tempting specials. "Four nights, £64 pounds – plus December Turkey and Tinsel Lunch," one begs.

Nine-tenths of Blackpool's revenues come from tourism and leisure. Normally, the illuminations alone attract nearly a million day trippers a year. But so far this year, there has been an overall 15 per cent drop in visitors. And the ones that came neither stayed nor spent.

Car parking numbers show that the trippers keep coming – there has been only a 1.5 per cent drop in the use of Blackpool's 2.6m car parking spaces. Nor has there been a collapse in deckchair rentals, another barometer of Blackpool's business climate.

But money has been tighter than ever in the crucial Easter-to-Bonfire-Night period when Blackpool expects to reap 89 per cent of all its visitor spending. It's only slightly better at the up-market end of the market. The Imperial, the redbrick pile that is to house the leading Tories for the conference week, has managed to sell about 70 per cent of its 183 rooms over the summer.

This week, the Tories will be talking of recovery against a local backdrop of recession. The town's unemployment among 16-24 year olds has risen 60 per cent on the year; house sales have slumped; and only 5 per cent of the area's largest manufacturing companies are working to capacity. Fifty per cent expect export orders to fall further over the next 12 months. It is only Blackpool's classic attractions that have kept heads above water. Pleasure Beach, where the *theme* has been *fun* since 1910, has enjoyed a 7 per cent rise in visits this year.

Best of all, Carey Feldwick at Yates' Wine Lodge – where the champagne used to run on tap – has seen a steady trade this season and expects a heaving bar all week. "The Tories will come in with loads of taxpayers' money at lunchtime and go back to the Winter Gardens full of champagne," he predicts. Everyone else in Blackpool will be drinking pints of ordinary bitter.

The UK economy: Major's election battleground, special reports Page 8

The banks fumble for a new role

By Anthony Harris

The savaging of the big English clearing banks by the Consumers' Association will please a lot of their customers. The association accused them of "breathtaking arrogance", which sounds fair enough if you remember Sir John Quinton's justification of deducting charges before you tell the victim: "Because we hold the money."

Shareholders, however, know that bad behaviour reflects desperation rather than arrogance. Arbitrary charges and usurious loan rates are barely keeping pace with the continuing write-offs, so profit prospects are still doubtful. For the moment, the bankers are baling out their barely seaworthy craft; if some passengers get soaked in the process, that is their bad luck.

The clearers must wonder in the small hours how long they will be able to hang on to the money of customers who could get cheaper and more efficient cash management from the building societies or the Post Office; but for the moment they must rely on the old stand-by – the fact that most depositors are too lazy to shop around. This no longer gives them free funds, as it did in the good old days of interest-free current accounts, guaranteeing spreads which made retail lending reliably profitable.

But it does give them time to invent a new package of services which will deserve the loyalty of customers. Devising services, from share dealing to life insurance, is the easy part. Managing them, however, looks like a nightmare. At the moment, the clearers have two grave handicaps: they are physically over-equipped, both with branches and with information technology; and they know next to nothing about the cost of any particular service they do offer.

They are working hard at the moment on unbundling costs; but shedding them will take time. For example, there are enormous economies of scale to be achieved in back office operations on the securities side – custodial work and settlement. These ought to be available as soon as the present talks on a European settlement system are concluded. In practice, they can only be realised when the banks feel strong enough to write off their excessive investment in in-house hardware. Depreciation would save face in the end, but it may take too long. And then there are the staff, and the buildings...

Meanwhile, the clearers remain loan-shy, which is bad luck for our growth prospects; and the tide continues to flow hard against them. One persistent bit of City gossip makes the point eloquently. CitiCorp, which has already made some painful defensive adjustments in London, is said to be waiting for the right moment to make its first expansive move in a long time: when the price is right, and the risks are acceptable, it will bid for a large building society.

Prudence rather than enterprise is now the watchword in the US as much as in the UK

Read that sentence again, and then imagine reading it in the go-go days of only three or four years ago; how are the mighty fallen. The idea that the expertise the banks most need to buy is that of the humble friendly societies would have been unthinkable then. But if your core business is not grand-scale financial engineering, but the economical provision of user-friendly services for ordinary people, it shows wisdom. This wisdom is easier to buy off the peg than to implant in a sick bank.

CitiCorp has learned its modesty in a hard school; the loan experience of most of the New York money-centre banks makes our own clearers look like models of prudence. Prudence rather than enterprise is now the watchword in the US as much as in the UK, and with similar results. The White House still does not grasp this; it issues repeated alarm calls about a "credit crunch", blames the bank supervisors and the Basle capital requirements, and is trying to stretch the rules to make the banks more comfortable. This may provide scapegoats, but it is unlikely to provide loans.

What will help – in the end – is the lower interest rates which the Fed continues to provide. These have enabled the banks to restore reasonable spreads, and have helped manufacturing industry through devaluation. The export-led recovery which has resulted looks fairly secure, despite deflation in Europe and Japan; enhanced competitiveness, and the Latin American boom, should underwrite US growth. The domestic economy will take longer to restore. Loan rates are still high in real terms, and confidence only beginning to revive. (Britain, with a "fixed" exchange rate, and real interest rates inexorably rising, is in a worse fix.)

"Financial conservatism has the power to stifle economic growth," as Dr Henry Kaufman reminded the National Association of Business Economists 10 days ago; and, from the same talk: "Stabilisation of the economy through monetary policy works through credit crunches... by limiting or even eliminating access to credit altogether for marginal borrowers. The latest credit crunch is centred entirely on credit quality deterioration."

Dr Kaufman's purpose was not so much to deliver these home truths (though they should be inscribed in the British Treasury as well as in the White House); it was to ask why the folly which led to collapse was ever possible. He traced the whole history of risk-shifting and risk-concealing invention, from the first CDs in the 1960s, through floating-rate finance (long entrenched in Britain, but new in the US), loan syndication, swaps, securitisation and the rest. Liquidity was thought to be limitless, and the illusion facilitated a prolonged three-card trick, in which bankers finally lost sight of risk altogether.

A technical failure? No; in the last resort. Dr Kaufman saw it as a moral issue. "Much of the responsibility for lapses of proper conduct rests with some of the senior management of my generation." Many of the yuppies "were not taught business ethics, the responsibilities inherent in prudential behaviour, or the lessons of financial history."

This is a moving confession from a former partner in Salomon Brothers – especially one who has preached prudence so unwearyingly; but surely one of the lessons of history is that these lessons cannot be taught. They are only learned from personal experience.

Tax inquiry into Korean groups

By John Ridding in Seoul

THE SOUTH Korean government is investigating eight of the country's largest conglomerates on suspicion of evading taxes, the office of national tax administration (Onta) said at the weekend.

The move follows revelations last week that Hyundai Group, Korea's second-largest conglomerate, and its founder, Mr Chung Ju Yung, are under investigation by the tax authorities for avoidance of inheritance taxes.

The probes will further strain relations between the *chaebol*, the family-controlled conglomerates which dominate the Korean economy, and the government.

The traditionally close relationship between business and government has already been undermined this year by official policies aimed at making diversified business groups specialise in fewer industries and sell off non-business-related land.

Onta is also investigating Daelim Industrial, Sammi Group, Hanil Synthetic Fibre, Kangwon Industrial, STC Corp, Aekyung Chemical and Pusan Steel Pipe.

An official said that all the groups were suspected of making over-the-counter sales of stocks, at artificial prices, to relatives of the groups' senior management. According to Onta, such sales have been used to avoid inheritance taxes and transfer assets to the next generation of management.

It is unusual in South Korea for the tax office to investigate large business groups. One explanation is that the government is angry with Mr Chung, one of the country's most powerful businessmen, for criticising its economic policies.

But the revelation that seven other groups are under investigation suggests broader motives. In particular, the government has been seeking measures to limit the concentration of economic power among the conglomerates.

In a report to President Roh Tae Woo last week, Mr Choi Gak Kyu, minister for economic planning, said the government would press big business to reduce the equity held by their owners, increase inheritance and gift taxes, and strengthen reporting procedures for intra-group share transactions as part of the 1992-1996 five-year economic plan.

Norwegian group to monitor Iraq oil sales

By Karen Fossli in Oslo

NORWAY is to create a special group to monitor Iraq's $1.6bn worth of crude oil sales, agreed as an exception to the UN embargo against Baghdad for humanitarian reasons.

The Norwegian group, acting at the request of the UN, will be headed by Mr Arve Johnsen, the former head of Statoil, the government-owned oil group. It will comprise representatives both from Statoil and Saga petroleum, Norway's biggest independent oil company.

The group will be entrusted with ensuring that all Iraqi oil sales allowed for under the exception to the embargo are undertaken in market conditions, as stipulated by the UN, and that all profits go directly to meet humanitarian needs.

The Security Council agreed to allow Iraq to sell crude oil worth $1.6bn or, at current market prices, 500,000 barrels a day over six months. Profits will be channelled into a UN-controlled escrow account from which Iraq will be permitted to pay for badly needed medical and food supplies.

The revenues will also cover the expenses of the Norwegian technical advisory and monitoring group.

The oil sales will be conducted by the Iraq state oil company, advised and assisted by Statoil and Saga.

Iraq and nuclear power, Page 6.

Bush ready to look at budget package

Continued from Page 1

stipulates that any tax cuts require corresponding spending cuts; and that funds cannot be shifted between the defence and domestic budgets.

President Bush's proposals for sweeping nuclear arms cuts 10 days ago increased the pressure for deeper defence cuts, beyond the 25 per cent reductions in manpower scheduled over the five years. There are also hints that some defence funds could be used for US aid to the Soviet Union.

Mr Darman, one of the main architects of the budget pact, said yesterday that reopening the budget agreement was not inevitable but there was "tremendous pressure" to do so.

"You can't have the radical changes we've seen in the Soviet Union and not expect there's going to be some adjustment in the defence budget. The president's already made a major move, and it will have some savings. With further adjustments, there may be more savings."

De Havilland takeover

Continued from Page 1

Pressing home his counter-offensive, Mr Delors said many Frenchmen misunderstood his role in the Commission as being like the presidential system they had at home.

"I am not president, merely *primus inter pares*", he said.

He abstained in the de Havilland vote last Wednesday, after it became clear that Sir Leon had a clear majority for his merger block. "It would be all too easy for me to vote against, and then to go public with that fact, but I have to respect the collegiality of the Commission", Mr Delors said.

WORLDWIDE WEATHER

		°C	°F			°C	°F			°C	°F			°C	°F			°C	°F
Ajaccio	F	21	70	Berlin	S	19	66	Caracas	C	28	83	Faro	S	27	81	Islamabad	F	29	84
Algiers	C	23	73	Biarritz	F	16	61	Casablanca	F	23	73	Florence	F	21	70	Istanbul	R	21	70
Amsterdam	F	16	61	Bombay	S	32	90	Chicago		-	-	Frankfurt	C	15	59	Jakarta	F	33	91
Athens	R	17	63	Bordeaux	C	15	59	Cologne	C	12	54	Geneva	R	11	52	Jersey	S	15	59
Bahrain	S	31	88	Boulogne		-	-	Copenhagen	F	15	59	Gibraltar	F	21	70	Johannesburg	F	27	81
Bangkok	R	33	91	Brussels	F	15	59	Corfu	S	26	79	Glasgow	R	11	52	Lima	C	20	68
Barcelona	S	19	66	Budapest	S	21	70	Dallas		-	-	Helsinki	S	12	54	Lisbon	S	22	72
Beirut	S	27	81	Buenos Aires	C	19	66	Dublin	F	13	55	Hong Kong		-	-	London	F	14	57
Belfast	F	9	48	Cairo	S	29	84	Dubrovnik		-	-	Innsbruck	F	18	64	Los Angeles		-	-
Belgrade	S	23	73	Cape Town		-	-	Edinburgh	F	11	52	Inverness	C	12	54	Luxembourg	C	12	54

		°C	°F			°C	°F			°C	°F			°C	°F			°C	°F
Madeira	F	23	73	Milan	R	15	59	Nicosia	R	19	66	Salzburg	F	18	64	Tenerife	F	24	75
Madrid	S	18	64	Montreal		-	-	Oporto	S	21	70	San Francisco		-	-	Tokyo	C	18	64
Majorca	F	22	72	Moscow	C	8	46	Oslo	S	13	55	Seoul	F	21	70	Toronto		-	-
Malaga	S	22	72	Munich	C	14	57	Paris	C	13	55	Singapore	F	32	90	Tunis	F	27	81
Malta	S	25	77	Nairobi	C	28	82	Peking	S	22	72	Stockholm	F	12	54	Valencia	S	23	73
Manchester	S	12	54	Naples	S	25	77	Prague	S	15	59	Strasbourg	C	14	57	Venice	S	20	68
Manila	C	32	90	Nassau	F	32	90	Reykjavik	F	7	45	Sydney	S	32	90	Vienna	S	18	64
Melbourne	F	20	68	New Delhi	S	31	88	Rhodes	F	21	70	Taipei	C	26	78	Warsaw	S	17	63
Mexico City	R	24	75	New York		-	-	Rio de Janeiro	C	27	80	Tangier	S	27	81	Washington		-	-
Miami		-	-	Nice	R	16	61	Rome	S	23	73	Tel Aviv	S	29	84	Zurich	R	12	54

Temperatures at midday yesterday C–Cloudy Dr–Drizzle F–Fair Fg–Fog H–Hail R–Rain S–Sunny Sl–Sleet Sn–Snow T–Thunder

FINANCIAL TIMES
COMPANIES & MARKETS
Monday October 7 1991

INSIDE

German stake in BT's Syncordia likely

Germany's Deutsche Telekom seems likely this week to take a 26 per cent stake in BT's Syncordia venture, which the UK group has set up as a vehicle to run voice, data and video links for multinational companies. A partnership with Europe's largest telecommunications company by amount of telephone traffic would boost the venture, which is a central plank of BT's ambition to globalise its business. Page 19

Nissan seeks French deal

Nissan Motor, Japan's second largest car maker, has applied to the French Finance Ministry for permission to acquire Richard Nissan, its French importer/distributor, in a deal valuing the company at FFr861.3m ($152m). Nissan, the leading Japanese maker in the European car market, holds a 9.55 per cent stake in Richard Nissan and is seeking approval to buy the 72.09 per cent stake held by the Richard family. Page 19

Changing with the times

Tomorrow a UK construction equipment company is likely to report a near 50 per cent improvement in pre-tax profit. Such growth would have caused a small stir even in the happy days of the late 1980s. To achieve it now looks little short of miraculous. With UK house building severely affected by recession, Mr Roger Shute (above), chairman of BM Group, says the sales effort has been switched away from small excavators and towards much larger machines for infrastructure projects. Page 18

Ecu bonds take a knock

Turmoil in the Ecu bond market at the end of last week, sparked by speculation on the future form of the European currency unit, may have knocked investor confidence in the sector. Prices in 10-year Ecu Eurobonds slid ¾ point in a wave of selling on Thursday. But the volatile conditions which prevailed during the sell-off have raised doubts about the market. Page 21

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Endesa	19	Sung Hung Kai Props	19
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BAe's £432m rights issue is due to be approved today. FT writers examine the background

Aiming to calm the worried shareholders

By Robert Peston

Sir Graham Day, interim chairman at British Aerospace, admitted over the weekend that some of his shareholders "are not best pleased" by the dramatic reversal in the fortunes of the aerospace and automotive group.

One of his biggest shareholders explained its unhappiness: "Hundreds of million pounds have gone up in smoke".

To be precise, in the six months between the end of 1990 and June 30, 1991, BAe's net debt increased from £808m, ($1.4bn) excluding advances from customers, to £1.5bn.

That £700m outflow of cash was not expected by shareholders and analysts.

They were more alarmed by this weakening in BAe's balance sheet than by its warning that 1991 profits are likely to be £150m, half what analysts had hitherto been expecting.

There is no doubt, therefore, that BAe badly needs the proceeds of its £432m rights issue. Shareholders will gather this morning in the City of London to vote on whether the issue should go ahead.

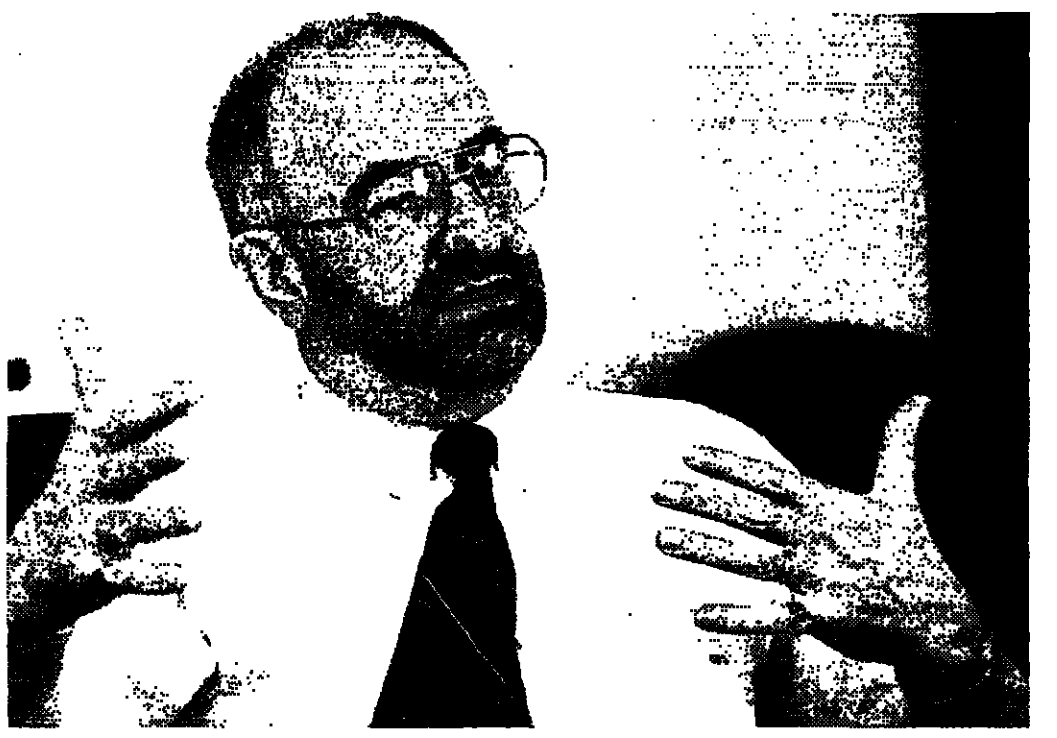
"The issue will be approved", commented one of BAe's biggest shareholders.

But that should not be seen as a vote of confidence in the company's management. "If we did not provide the funds, that would be the equivalent of cutting off our nose to spite our face."

"It was right Sir Graham should replace Sir Roland Smith as chairman", he added. "But it is going to take time for the board's reputation to be restored."

Sir Graham defended the companies' team of executives, led by the chief executive, Mr Dick Evans, and the finance director, Mr Dudley Eustace. "The board is solidly behind the executives", he said. "It could have chosen to make changes but decided unanimously against doing so."

"Dick Evans is the only person in this country capable of dealing with the Al Yamamah business", he added. Al Yamamah is the Saudi Arabian programme of military spending, which has contributed more than £8.3bn of revenues to BAe in the past few years and is vital to the company's future prosperity.



Lydia van der Meer

Graham Day: confident there is no question of breaking the company up

He was also categoric that the collapse in BAe's profits and the outflow of cash are not indicative of poor financial controls.

He said the effects of the recession, on the Rover car business and Arlington Securities' property development activities, could not have been predicted.

As to the future, Rover will not be a drain on BAe's resources, Sir Graham insisted: "It will be able to fund itself".

That is remarkable, given that Rover's investment plans will involve £200m of capital expenditure annually for the next three years and a further £150m of costs put through the annual profit and loss account.

As for the property business, he said: "We don't need a fire sale."

Sir Graham said BAe's military activities would increasingly involve joint ventures with continental European groups on particular projects, such as weapons programmes, to share development costs and tie in a wider range of government customers.

He added that BAe would consider approaches from potential buyers of Dynamics, its troubled missiles business.

But it is not planning any complex deals which would pool its military aircraft activities in a European joint venture.

He said: "We can see no benefit to shareholders in doing something clever on military aircraft." BAe is Europe's largest military aircraft manufacturer.

In civil aerospace the group's commitment to the Airbus European aircraft consortium is unquestioned but Sir Graham confirmed that BAe was exploring the possibility of pooling its regional commuter jet manufacturing activities with an overseas partner.

He insisted that neither the company's management nor strategy was in need of radical review.

Sir Graham was confident that the proceeds of the rights issue would allow BAe to survive the recession in its current form and there was no question of breaking the company up.

"He may be right", said a shareholder. "But at the moment, that is not a credible statement."

"It is inevitable that businesses will be demerged", said another.

Sir Graham admitted that in the past "not all the company's messengers were delivering a single message".

Some shareholders and analysts were allowed to build up unrealistic expectations about BAe's prospects.

Now BAe has a different problem.

There may be only one message coming out of the company, but it is not yet getting through.

Lord Weinstock is likely to keep a close eye on this week's developments at BAe

GEC is ready and waiting in the wings

By Charles Leadbeater

The General Electric Company's interest in British Aerospace could develop in two different ways. The first is that BAe regains its stability, with the approval today of its £432m ($751m) rights issue to bolster its balance sheet and Sir Graham Day's commitment to his job as chairman lending much needed weight to BAe's management.

If BAe is seen to be sound by institutional shareholders, the UK government and its key customers GEC will see no need to do anything. Lord Weinstock, GEC's managing director would not approach Sir Graham with proposals for an alliance secured by GEC taking a 30 per cent stake in BAe.

However, executives in charge of particular GEC and BAe businesses might be encouraged to propose joint ventures, for instance in missiles or space activities.

Such ventures would formalise GEC's link with BAe as its protective partner in military activities, in much the same way that Honda, the Japanese car manufacturer is linked to Rover, owned by BAe.

Two developments might force GEC to act more swiftly.

First, if institutional shareholders at the end of this month took up perhaps less than 75 per cent of the rights issue, this might trigger a further crisis of confidence in BAe. The UK Ministry of Defence, faced with a disturbing loss of confidence in Britain's largest defence contractor, might broker an alliance with GEC. The BAe board would also have to consider changing tack and talking to GEC. In the event of BAe being rebuffed by a significant minority of its shareholders GEC would be ready to step in quickly to bolster the aerospace group by taking a minority stake.

Second, the UK government might become concerned that BAe could become a huge liability if its financial crisis proves deep and enduring. Former BAe executives do not disagree with City assessments that the company will need much more money to cut its military business down to a manageable size while also funding development work for the Airbus European aircraft consortium.

Rather than wait for a second crisis to hit the company in a couple of years, the government might decide it should be sorted out now by underpinning BAe with some of GEC's cash rather than using the taxpayers'. A vital factor in determining the government's position would be whether the Saudi Arabian government, a large BAe customer for weapons, aircraft and civil engineering, indicated it was less than confident of BAe's position.

Which of these two scenarios – the gradualist or the short and swift – proves closer to the truth will turn on sentiment towards BAe among shareholders and politicians. But whether it takes weeks or the best part of a year, it seems increasingly likely that GEC and BAe's military businesses will become further intertwined.

French state to sell 24% of insurer

By William Dawkins in Paris

THE French Finance Ministry is preparing to sell a 24 per cent stake in the state-owned Caisse Nationale de Prévoyance (CNP), the country's second largest provider of life insurance, to the private sector.

Analysts say the sale is expected to be worth around FFr3bn ($527m)

CNP has FF120bn under management, giving it an estimated 12.4 per cent of the French life insurance and savings market.

The sale is the second disposal to be announced since the French government extended its programme of partial privatisations at the end of August.

The first was Crédit Local de France, a local authority bank, expected to raise FF2bn for the state coffers, when it sells a 20 per cent stake on the stock market this autumn.

Like Crédit Local, CNP will only be selling existing shares owned by the state, rather than issuing new capital for investment in itself.

Unlike Crédit Local, there is no plan for an immediate flotation, though this could happen later, say officials.

The move will further fuel criticisms that the government is using partial privatisations to help reduce its budget deficit rather than allowing state companies to boost their capital, as voiced recently by Mr Jean Peyrelevade, chairman of state owned Union des Assurances de Paris, and shared by several colleagues.

CNP now has the status of a public establishment like Electricité de France, and is to be changed into a standard state-owned company under a law to be presented to the current session of parliament, in time for partial privatisation early next year.

The 24 per cent stake would be sold to French and foreign partners, possibly other European life insurance companies, while the Caisse des Dépôts, the state financial institution which today manages CNP, would buy another 25 per cent.

The government would keep the remaining 51 per cent.

Two banks have been asked to prepare a valuation of CNP by the end of the year, estimated by analysts to be worth around FF12bn.

That would value the private sector and Caisse des Dépôts stakes at FFr3bn each.

CNP recorded net profits of FF873m on sales of FF29bn in 1990, expected to rise to around FF35bn this year.

The west must now begin to learn restraint

Economics Notebook
By Quentin Peel in Bonn

IT IS perhaps in the German nature to treat all celebrations with feelings of gloom and foreboding – a sort of mirror image of that peculiarly German concept of Schadenfreude.

It was certainly true of the celebrations last week to mark the first anniversary of unification. Part of the gloom was well justified by the racist activities of gangs of marauding skinheads in both halves of the country, attempting to terrorise the rising number of immigrants and asylum-seekers. But the rest was self-inflicted *angst* at the agonies and consequences of the unification process.

The surprising thing is that anyone should ever have thought the process was going to be anything other than excruciatingly painful, psychologically, politically and economically. The fact that the ultimate shock therapy was applied – instant introduction of a common currency – meant that the pain was instant and massive. And yet virtually all the pain has been in the east.

That is where the real unemployment rate is pushing up to 40 per cent in the worst-hit regions, where the industrial base has simply imploded, and where the entire population has had to learn a complete new set of the rules of life, let alone of economic activity.

Inflation is rampant (rents tripled on October 1) and the grounds for bitterness are very real. In the west, unification has been remarkably painless.

The economy has boomed. Against the entire trend of the international recession, the industry of former West Germany has been producing up to the very limit of its capacity.

Unemployment is down to 5.6 per cent and wage settlements have reflected the labour shortage.

The real cost of unification has been borne by the budget deficit, a surge in government borrowing and a rather modest increase in taxation.

There has been an inevitable increase in interest rates as the capital markets coped with the excess demand.

To judge by the public outcry over increased taxes last July, the pain has been almost unbearable. In reality, it has been very modest. One year on, however, the bills may have to start being paid.

In the past month, a series of forecasts for the German economy in the coming year suggest that trouble is looming. Most melodramatic, the economics department of Dresdner Bank declares that "the German economy is presently on a knife-edge".

All the forecasts agree on a rapid slowdown for the rest of the year and into 1992, with an acceleration in inflation and a recession because of the inability of government and the trade unions in the west, to restrain their consumption in order to finance the recovery of the east.

For that is the choice facing the two halves of Germany.

Restraint in the west is essential if the massive demand for government subsidies in the east is to be financed without serious overheating.

And hitherto neither government, nor the western labour force, have shown any serious inclination towards such self-denial.

Mr Theo Waigel, the Minister of Finance, insists that his budget deficit will be cut to DM50bn (£17.1bn) next year and is set on finding cuts in subsidies to the tune of DM10bn – as demanded by his colleague Mr Jürgen Möllemann, the Economics Minister – to reach it.

But he fails to spell out all the other elements in the public deficit.

According to the Deutsche Institut für Wirtschaftsforschung – Berlin-based, and therefore as sympathetic as any to the plight of the east – the total public sector deficit this year will reach DM135bn, when the Länder, communes and special funds (like the Unity Fund) are included.

In 1992, it will only fall to DM130bn. The government only recognised the scale of the demands in the east belatedly, and underestimated the costs both of subsidies and infrastructure spending, it says.

Yet so far the brunt of the extra has been borne by deficit spending and tax increases, and the proposed spending cuts in the west are marginal.

Indeed, the DM10bn cuts are already being shot at from every side of the political spectrum, because they affect such important political interest groups as agriculture, shipbuilding and coal-mining.

The Länder governments in the west have also been very modest contributors to the cost of re-unification so far and the proposal that their traditional "structural assistance" from Bonn should be transferred to the eastern Länder is still very much in dispute.

On the wages front, there has been a similar absence of self-denial.

The pressure for wage equalisation in the east has been a significant force undermining the recovery of competitiveness in eastern industry. Productivity in the east is estimated at 30 per cent of that in the west, but wages are already at 65 per cent. The western trade unions have been a big force behind that equalisation movement.

The overheating in the west, however, is more a function of wage pressures in the west. Any suggestion that somehow there has to be a freezing of western living standards to pay for the eastern reconstruction is met with incredulity. The 7.5 per cent income and corporation tax surcharge payable this year has met with great bitterness and contributed to the growth in anti-unification sentiment in the west.

Which way the German economy tips off its knife-edge depends very much on the degree to which the wealthy western citizens are finally prepared to pull in their bulging belts. Otherwise the Bundesbank may be tempted to do the job for them and precipitate a recession which would then have dire effects on the recovery effort in the east as well.

"The high inflation rate and alarmingly high government borrowing involve a dangerous potential for conflict regarding the relationship between fiscal, monetary and wage policy," says the Dresdner Bank forecast.

"Already twice – in 1973-74 and 1980-81 – a conflict between monetary and wage policy contributed to a sudden end of an economic upswing. In the period of economic integration between the old and the new Länder, adverse strategies in economic policy would be fatal."

The bank clearly sees the danger of the Bundesbank, absolutely set on control of inflation and money supply, deliberately engineering a recovery from mid-1992 largely dependent on the rest of the international economy.

Statement expected on resignations from Fox

By David Barchard

MR PHILLIP THORPE, the new chief executive of the London Futures and Options Exchange (Fox), is expected to make a statement later this week on the events which led to the resignation at the weekend of Mr Saxon Tate, Fox's chairman, and Mr Mark Blundell, its previous chief executive.

The two men submitted their resignations at an emergency board meeting on Saturday morning, following the the discovery earlier in the week of possible irregularities in the operation of Fox's property future.

A spokesman for Fox said yesterday that an investigation into the irregularities was still under way and that Mr Blundell now accepted that the activities had been incompatible with his responsibilities as chief executive.

"The Fox board is satisfied that the motivation for the activities was not personal gain," the spokesman added.

The investigation is understood to include brokers who may have been booking cross-trades to give clients an inflated impression of volume in the property futures market.

This morning's trading will be a real test of the market's confidence in Fox. Traders will be waiting to see whether other Fox markets, including its floor-traded cocoa and coffee contracts, are affected by last week's upheavals.

Though Fox's board hopes it will eventually be possible to re-open the property futures operation closed on Wednesday, this is likely to take months rather than weeks.

Mr Michael Chataway, the deputy chairman, will act as chairman of Fox.

COMPANIES AND FINANCE

GPA seeks $500m via US bond issue

By Roland Rudd

GUINNESS Peat Aviation, the world's largest aircraft leasing company, is planning to raise up to $500m (£286m) through a public bond issue in the United States.

This will be the first ever public offering by the private Shannon-based group, whose flotation is scheduled for next year. It has appointed Merrill Lynch to register the debt issue with the US Securities Exchange Commission next month.

The GPA board decided in March 1990 to consider a sell-off simultaneously in Britain, America and Japan. The market had expected the first public fund-raising to come through the flotation itself.

Mr Maurice Foley, the chief executive, recently explained that the decision to go public reflected a combination of the company's growth and the need to provide a tradeable security for its 400 shareholders.

The board still intends to float the group by June of next year if market conditions are right. However, it has decided that it needs to raise more money by the end of December.

The group believes that airlines will not be able to fund directly more than 40 per cent of the $450bn needed for new aircraft. It wants to be in a position to provide that funding. It could have continued to raise money through its commercial paper programme, medium term notes and bank loans, which over the past nine months have been responsible for raising around $2bn.

However, it believes it will get better lending terms by widening the number of institutions involved in its debt programme. It has an estimated $2.5bn debt against $1.1bn of equity.

Since Mr Tony Ryan, the one time Aer Lingus leasing manager, created the group in 1975, it has expanded rapidly.

The company had 307 aircraft under its management at the end of March and currently has 94 leasing customers in 46 countries. GPA has 273 new aircraft on order up to the year 2000, and options on an additional 240.

However, some analysts remain concerned that the group may be affected by the softer pricing trend for operating leases and second hand aircraft. Nonetheless, GPA managed to perform well above the industry's average in its latest financial year with pre-tax profits rising from $247m to $281m (£166m).

Anglo Scandinavian likely to disappear

Anglo Scandinavian Investment Trust seems certain to disappear, whatever the outcome of the current £18.3m bid from Scottish Cities Investment Trust, writes Philip Coggan.

A number of approaches have been made to the trust by outside parties. The hope is that one of these will lead to a cash offer as close as possible to net asset value.

Anglo Scandinavian has a substantial stake in Scottish Cities, and in two other investment trusts in the Finsbury group, part of the business empire built up by the late Sir Walter Salomon.

Scottish Cities plans to use the bid as a means of partly reorganising the Finsbury group. It is feared an outside party might use the ASIT holdings for predatory purposes and disrupt Finsbury's plans.

Thinking big pays off for BM

Jane Fuller explains how Blackwood Hodge is being absorbed

TOMORROW a UK construction equipment company is likely to report a near 50 per cent improvement in pre-tax profit.

Such growth would have caused a small stir even in the happy days of the late 1980s. To achieve it now looks little short of miraculous.

The company is BM Group, which is estimated to have increased taxable profit from £23m to £34m in the 12 months to June 30 – about 60 times that made in 1983-84, the year it joined the stock market.

A few million pounds profit are expected to have come in from Blackwood Hodge, the international earth-moving equipment distributor acquired last November for £55m. However, the paper issued against the deal will have nullified the effect on earnings, which should be up by 20-25 per cent.

BM's advance owes more to switching its distribution effort to better markets in terms of application and geography. Margins have also been raised in manufacturing and in non-construction equipment lines.

With UK house building severely affected by recession, Mr Roger Shute, chairman of BM, says the sales effort has been switched away from small £30,000 excavators and towards much larger machines for infrastructure projects, fetching up to £1.8m each.

BM's push overseas has been gathering pace for at least three years. With Blackwood making 85 per cent of its turnover abroad, the UK is on its way to accounting for less than 30 per cent.

In the past year the better economies for equipment distribution have included Spain, France and Italy, while products made at BM's factories in the UK and US have been pushed out through the overseas distribution chains acquired since 1989.

Roger Shute: selling machines for £1.8m

Manufacturing efficiency has been improved by reducing the number of UK sites. Wickham's factory was closed at a cost of 250 jobs, and its product range split between other venues. Barber-Greene road pavers, for instance, came to Benford at Warwick, where the workforce has been promised no redundancies. In return it accepted a pay rise of only 3¼ per cent over 18 months.

The system operated is what Mr Michael Adamson, who runs the factory, calls AJIT – almost just in time – because four to eight weeks' stocks of finished goods are kept for a quick response to customers.

And what if there is no demand, as many competitors have complained? "You stimulate it," says Mr Shute, by kicking the salesmen into action. Sales to the continent have trebled in the past year.

Another Benford anecdote illustrates the BM approach to stocks, cash and paperwork. It used to store £70,000 of fasteners, supplied by several concerns. An agreement was reached with one supplier, who bought the stocks, cut prices by 7.5 per cent overall and delivers once a month. "Maximum cash flow, minimum paperwork," says Mr Adamson.

This is echoed in the Blackwood Hodge operations that BM has taken over. Mr Gordon Hough, finance director in Canada, says BM's prime emphasis is on cash.

"They gave us very clear operating policies and then they went away and left us to do it." He described Blackwood as providing "interference of the wrong type".

Trading conditions in what was the largest part of Blackwood have been miserable. The Canadian operation's turnover peaked at C$250m in 1989, but has fallen to about $180m, with the number of employees cut from 790 to 520.

A similar story is told in Australia – also in deep recession – by Mr Peter Nockles, managing director. Blackwood's head office demanded monthly management accounts running to more than 50 pages, BM makes do with 10. "In each of the important areas – trading results, margins, expenses, cash flow, balance sheet – BM executives get sufficient detail to pick up any problems. Under Blackwood, this was lost in a mass of detail."

Both men referred to BM's strong working relationship with the Japanese. This dates back to the origin of Mr Shute's business, working from home as UK importer of Hitachi excavators. The link has been cemented by the sale of a 49 per cent holding in Blackwood's Australian subsidiary to a Japanese consortium.

This deal was announced on the last working day of BM's financial year and brought in a precious £9m to help reach a gearing target of about 70 per cent. Debt is expected to have come down from £108m on December 31 to roughly £80m.

Blackwood's impact on BM's figures will be looked for most keenly on the balance sheet. Acquisition accounting has helped shovel the cost of reorganising the business – both before and after the takeover – below the line.

Although Blackwood made an £18.3m pre-tax profit in 1989 on sales of nearly £500m, its problems mounted rapidly last year. The worst were UK losses, an ACT-related taxation rate of 60 per cent, and debt.

Its 1990 first-half retained loss of £3m has been dwarfed by subsequent provisions. Interim results for the six months to December 31 (released because of outstanding preference shares) showed an £18m pre-tax loss and a further £17m deficit mostly covering restructuring costs and write-downs.

BM is, however, expected to take the whole £35m as a reduction in the Blackwood net assets which it takes on to the combined June 30 balance sheet. While Blackwood's net assets were £95m in December 1989, the combined group's figure for June 30 this year, including retained profit, is only likely to have risen from £63m to about £120m.

To get Blackwood into shape, the Northampton head office has been closed, UK depots shut, and the combined workforce reduced by 1,500 to 5,300. The savings in overheads alone is put at more than £15m a year. Blackwood's annual turnover will fall to about £300m with disposals playing a part since BM does not want the African, Asian or Far Eastern operations.

NEWS DIGEST

Torday hits out at Dowding bid

TORDAY & Carlisle, the niche engineer, has said that just one of its subsidiaries is worth more than the near £15m being offered by Dowding & Mills for the whole group, writes Jane Fuller.

Torday claims in its defence document that Dowding only wants DMI, which reconditions components for large diesel engines. DMI made a trading profit of £1m (£1.2m) in the first half of this year, but overall the group incurred a pre-tax loss of more than £600,000.

The main deficit was a £1m operating loss at Oldham signs, and Dowding has said it would sell this business. Torday defends this subsidiary, which made a £2.4m operating profit in 1989, as being well positioned for an upturn among retailing customers.

Torday says the offer places a negative value on Oldham and Elfab-Hughes, a profitable maker of pressure relief and safety equipment.

At Friday's closing prices, Dowding's 7-for-5 paper offer values each Torday share at just over 92p, compared with the market price of 97p.

Intl Media Comms cuts loss to £0.7m

International Media Communications, the USM-quoted provider of video services and related equipment, has cut its pre-tax losses from £2.38m to £715,000 in the year to April 30.

Mr David Cicurel, chairman, said the year had been one of intense activity. There had been a total capital injection of about £3.4m, including the rights issue and before expenses; the capital reorganisation had been approved by the High Court, reducing the nominal value of the shares to 1p; all outstanding litigation against the company had been settled; operations had been restructured, overheads reduced and management resources concentrated on sectors of the business with the most potential.

Turnover declined to £845,000 (£1.14m) and the pre-tax result was helped by sharply reduced exceptional charges of £229,000 (£1.48m). These related to irrecoverable royalties, adjustments to asset values of discontinued operations and non-recurring legal costs associated with restructuring the company.

Losses per share emerged at 0.42p (3.13p) and again there is no dividend.

Brown & Tawse resignation

Mr Keith Rae has resigned as chief executive of Brown & Tawse, the distributor of steel and pipeline products which lost £1.2m in the year to March. During the search for a new chief executive, Mr Gilbert Black, chairman, has assumed the duties.

Estates & Agency profit tops £1m

Over the 18 months ended June 30 1991 Estates & Agency Holdings achieved a rental income of £6.59m and pre-tax profit of £1.08m.

Properties were virtually fully let and the portfolio was well spread both in type and geographical distribution, the directors said.

In the previous 12 months to the end of 1989 net rents totalled £3.32m and profits were £508,000.

At June 30 the net asset value per share had fallen to 430p, against 710p at the end of 1989. There was a deficit on property revaluation of £16.3m, a decrease of nearly 21 per cent.

The final dividend is 4p for a total of 7.5p (6.25p).

Dividend rises at Welsh Indust Trust

In the year ended April 5 1991 pre-tax profits of Welsh Industrial Investment Trust improved from £104,000 to £106,000.

Earnings worked through at 5.29p (5.71p) per share and the dividend is lifted to 4.5p (4p).

Halstead improves 3% to £7.65m

James Halstead Group, the industrial concern, increased its pre-tax profit by 3 per cent, from £7.44m to £7.65m, in the year ended June 30, although turnover was only marginally ahead at £58.3m.

After lower tax, earnings per share rose 9 per cent to 36.12p (33.29p). The final dividend is a recommended 7p for a total of 11.25p (10.5p).

In floorcovering manufacture the group increased sales and profits in spite of the difficulties in the construction industry. More investment was being made in capacity to ensure the medium-term growth of Polyflor.

The section most affected by the recession was Belstaff, the maker of motorcycle equipment, rain and casual country wear. Sales fell, effectively negating the cost savings made previously, and a loss was incurred.

Increased sourcing had been accelerated as a way of improving margins and it was likely Belstaff would continue to reduce its UK manufacturing base.

Higher interest cuts IRG to I£763,000

Higher interest charges resulting from its recent acquisitions left IRG, the packaging products company based in County Kildare, with interim pre-tax profits 25 per cent lower at I£763,000 (£700,000), against I£1.02m.

On turnover of I£30.1m (I£27.2m) for the first half of 1991 operating profit was I£1.53m (I£1.47m). The final payment on its purchase of KSH Plastics and the acquisition of Interlux and Precision Metalwork resulted in an interest charge of I£769,000 (I£445,000).

Mr Brendan O'Kelly, chairman, said continuing difficulties in the UK and the higher interest cost made it unlikely that last year's record result of I£2.76m would be repeated.

After tax of I£181,000 (I£133,000) and minorities of I£27,000 (I£57,000) earnings per share came out at 3.9p (6p).

An unchanged interim dividend of 1.75p has been declared.

CROSS BORDER M&A DEALS

BIDDER/INVESTOR	TARGET	SECTOR	VALUE	COMMENT
Nissan Motor Co (Japan)	Richard Nissan SA (France)	Car distribution	£63m	Finance ministry permission requested
North West Water (UK)	Wallace & Tiernan (US)	Water treatment	£74m	No MMC referral
Footwork International (Japan)	Harry W Hamacher (Germany)	Transport	£35m	Cash transaction
Scottish Equitable (UK) Wuttermbergische (Germany)	JV	Insurance	n/a	Long-term venture
Gilde Investments (Holland)	Unit of GKN (UK)	Cycle accesories	£10.6m	Disposal of Dutch unit
Gerber Products (US)	Alima (Poland)	Fruit juice	£6.5m	Polish privatisation
Littlewoods (UK)	Unit of Federal Express (US)	Mail Order	n/a	FedEx retrenching
E Merck (Germany)	Lipha (France)	Pharmaceuticals	n/a	Merck buys 52%
Honda (Japan)	Svenska Honda Bilimport (Sweden)	Car distribution	£1.8m	50% stake taken
Alcoa (US) Kobe Steel (Japan)	JV	Aluminium processing	n/a	Car-driven venture

Source: FT Mergers & Acquisitions International

COMPANY NEWS IN BRIEF

BROMSGROVE INDUSTRIES has paid £1.38m for the precision engineer Ajax of Coventry and £450,000 for Ajax of Coventry (Investments). Payment will be £125,000 by the issue and allotment to Mr John Smart, the principal vendor, of 88,842 Bromsgrove ordinary and £1.7m cash satisfied by an institutional placing.

MEDITERRANEAN FUND: Net asset value $83.27 (£47.68p) as at June 30, down from $124.92 over the 12 months. Net revenue $269,000 ($351,000) for earnings of 49 cents (64 cents) per share.

COMPANIES AND FINANCE

Nissan seeks go-ahead to buy French distributor

By Kevin Done, Motor Industry Correspondent

NISSAN MOTOR, Japan's second largest car maker, has applied to the French Finance Ministry for permission to acquire Richard Nissan, its French importer/distributor, in a deal valuing the company at FFr861.3m ($152m).

Nissan, the leading Japanese maker in the European car market, holds a 9.55 per cent stake in Richard Nissan and is seeking approval to buy the 72.09 per cent stake held by the Richard family.

It is paying FFr1,253 per share, valuing the family holding at FFr629.9m. It will make the same offer to minority shareholders.

The car maker agreed in April to buy the family stake in the company, when Mr Jean Pierre Richard, the founder and president, announced his retirement.

Takeovers of French companies by non-European Community businesses must be vetted by the French government, one of the few foreign investment controls left in France.

Nissan said it expected its vehicle sales in France to rise to 37,000-38,000 this year from 30,770 in 1990.

It is rapidly expanding control of its European vehicle distribution network. The group is establishing its own distribution operations in the UK following a prolonged conflict with Nissan UK, its privately owned British importer for the past 21 years, whose contract has been terminated from the end of the year.

Nissan holds direct control of its vehicle distribution operations in Germany, Italy, Spain, the Netherlands and Switzerland.

Deutsche Telekom set to take stake in BT venture

By Hugo Dixon in Geneva

GERMANY'S Deutsche Telekom seems likely this week to take a 26 per cent stake in BT's Syncordia venture, which the UK group has set up as a vehicle to run voice, data and video links for multinational companies.

A partnership with Europe's largest telecommunications company by amount of telephone traffic would boost the venture, which is a central plank of BT's ambition to globalise its business.

But Syncordia, based in Atlanta, Georgia, suffered a flat launch last month when BT, formerly British Telecom, was unable to announce any firm customers, or even where the service was available.

BT had also been unable to finalise plans for Deutsche Telekom and Nippon Telegraph and Telephone, Japan's largest telecommunications group, to take minority stakes.

However, Deutsche Telekom said on Friday it would decide whether to join this week.

Iain Vallance: meeting likely with Telekom head

It is understood that Mr Helmut Ricke, Deutsche Telekom's chief executive, is likely to meet Mr Iain Vallance, BT's chairman, in Geneva this week, where both will be attending the Telecom 91 exhibition.

In a further boost to Syncordia, BT said it was close to signing Amadeus, the European airline reservation system, as its first customer. Syncordia would manage part of the Amadeus network.

Syncordia is having difficulty identifying where it will offer services because monopoly regulations in most countries restrict the range of services that can be offered by any company, except state-owned operators.

A partnership with Deutsche Telekom would at least allow access to the important German market.

BT is hoping that restrictions in other countries will crumble through a combination of pressure from users who want more choice and governments which wish to promote competition.

Utility opposes rival's Fecsa bid

By Tom Burns in Madrid

ENDESA, the state-controlled Spanish electricity generator at the centre of big domestic takeovers this year, appears to have encountered resistance to its acquisitive drive.

Iberdrola, the main private sector utility, is formally to oppose the generator's plan to bid for Fecsa, which supplies some 54 per cent of Catalonia's electricity needs.

Iberdrola was formed in June on the merger of Iberduero and Hidrola, the two biggest private companies. It has notified the stock exchange commission that last week's agreed $400m bid by Endesa to raise its Fecsa stake by 25 per cent to a controlling 40 per cent prejudiced the interests of other shareholders. Iberdrola owns between 13 and 17 per cent of the Catalan company.

Iberdrola maintains the private utilities, which acquired equity in Fecsa to rescue it from threatened bankruptcy four years ago, are unlikely to recoup their investment under the terms of Endesa's bid.

Mr Luis Carlos Croissier, Spain's National Securities Market Commission (CNMV) president, last week approved the bid, which has been sanctioned by the government. He did so after the CNMV board had failed to take a decision on Endesa's bid and delegated responsibility to him.

Analysts stressed Iberdrola's surprise move illustrated a worsening relationship between the private and public companies, as a reorganisation of the domestic utility sector looms. Iberdrola's complaint was seen as a sign the private sector intended to drive a hard bargain in the reorganisation negotiations.

Iberdrola will also seek a distinction between Endesa's role as a wholesale supplier and its more recent one as a distributor. This follows its takeover of Viesgo, a small northern coast utility and its acquisition of a 35 per cent stake in Sevillana, the monopoly distributor in southern Spain.

Bikuben aims to raise DKr523m

BIKUBEN, Denmark's third largest bank, plans to raise DKr523m ($80m) through a one-for-seven rights issue, priced at DKr250 per share, writes Hilary Barnes in Copenhagen.

The savings bank, which was converted to a joint stock company in 1989, has assets of about DKr100bn. This will be its second rights issue since the conversion two years ago.

The issue will help strengthen the bank's capital base after the acquisition this year of Sparekassen Sydjylland, the South Jutland savings bank.

HK SE calls meeting to try to agree rule changes

HONG KONG'S stock exchange, which faces compulsory reform to bring it into line with international standards, is to hold an extraordinary general meeting on October 30 in a last effort to push through voluntary changes, writes Angus Foster in Hong Kong.

Over the weekend the Securities and Futures Commission, the market watchdog, issued two restriction orders against the exchange as the first step towards introducing the compulsory reforms. These are designed to widen the representation on the exchange's ruling council to include large stockbrokers and to abolish practices such as proxy voting.

The exchange has now put forward new proposals, designed as a compromise between the SFC's package and the interests of small Chinese brokers.

The package needs 75 per cent backing from exchange members. Previous packages have failed to win 50 per cent approval.

Property group ahead

SUN HUNG KAI Properties, a Hong Kong property developer, announced a 39 per cent increase in net profits to HK$3.43bn (US$443m) for the year to the end of June, writes Angus Foster.

The results reflected a year of record property development profits and rental income.

The company is recommending a final dividend of 62 cents a share, to make total dividends for the year of 96 cents, up 25 per cent on last year. Sun Hung Kai is also paying a cash bonus of 15 cents a share.

Auditor qualifies results of troubled Aberfoyle

By Joel Kibazo in Harare

THE BELATED 1990 results of Aberfoyle Holdings, the troubled agriculture, textile, security products and services group operating in Zimbabwe, have been qualified by KPMG Peat Marwick McLintock, the company's auditor.

Pre-tax profits for the 12 months to the end of December fell 77 per cent to £1.21m ($2.05m) and earnings per share fell from 5.41p to 0.75p. Again there is no dividend.

Turnover declined to £8.37m against last year's £9.24m, and profits from disposals and income from investments and properties fell sharply to £452,000 compared with £4.63m.

The group, which last month faced going into administration after refinancing talks were suspended, said the figures had been qualified by KPMG because of "uncertainty" over the company's future as a going concern.

In addition, KPMG was concerned whether Aberfoyle would find sufficient funds to complete its biggest project, the Mwenezi development in Zimbabwe.

Last month, shareholders, thought to represent more than 40 per cent of the company, called for an extraordinary general meeting to replace most of the Aberfoyle board. The two sides failed to resolve their differences and a meeting has been called for October 24.

NRI TOKYO BOND INDEX

December 1983 = 100	PERFORMANCE INDEX 3/10/91	Average yield (%)	Last week	12 wks ago	26 wks ago
Overall	163.73	6.16	163.06	156.01	153.80
Government Bonds	162.17	5.98	161.22	153.50	151.55
Municipal Bonds	165.95	6.35	164.89	157.85	155.65
Govt.-guaranteed Bonds	168.41	6.40	167.50	160.72	158.39
Bank Debentures	160.04	6.05	159.84	153.18	150.84
Corporate Bonds	164.16	7.07	163.87	159.52	157.05
Yen-denom. Foreign Bonds	171.14	7.16	170.91	165.33	160.65
Government 10-year†	5.99	-	6.08	6.71	6.61

† Estimated par yield

Source: Nomura Research Institute

INTERNATIONAL CAPITAL MARKETS

UK GILTS

Depressed sterling dampens market

SPECULATION about currency movements dominated discussion in the gilt-edged securities market, as prices moved moderately upwards after the sharp decline at the end of last month.

During the week, yields declined by between 5 and 10 basis points for most classes of gilts, after the market came to terms with assessments about inflation trends for the next few months.

The annual rate of rise last month in the retail prices index was probably about 4 per cent, after 4.7 per cent in August, according to the estimates of many private-sector economists.

The figure is due to be announced by the government on Friday and may be followed next month by a figure for October as low as 3.5 per cent – giving the UK an inflation performance that (at least temporarily) rivals that of France and Germany.

But despite this favourable trend for gilt practitioners, worries persist about the possibilities of greatly increased public-sector borrowing in the financial year beginning next April. If this requires a large volume of gilt issues, prices could be depressed.

Other discussions which have dampened the gilt market concern sterling's position in the European Monetary System's exchange rate mechanism. The pound has lacked strong buyers in the foreign exchange markets for several weeks and on Friday was quoted at just less than DM2.92, or 3 pfennigs under its DM2.95 central rate in the grid.

While sterling appears becalmed, the outlook for gilts is not particularly positive, as a large force in the market during the last year has been overseas investors – who may be dissuaded from buying gilts if the pound remains depressed.

The discussion about how sterling could be affected by broad currency movements in the next few weeks and how this might affect the outlook for gilts, had four main components. Two were positive for the pound, two negative:

● Expectations of an imminent cut in UK base rates, now at 10½ per cent, have all but died away. With the Conservative party having decided to opt for an election next year, rather than in November, there is now no political requirement for an early easing in monetary conditions policy, a factor that has probably given a short-term boost to sterling.

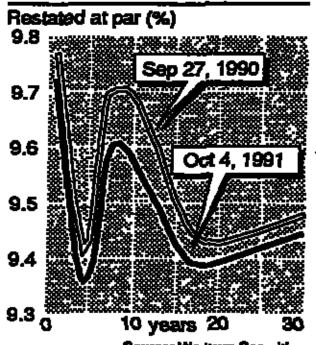
● Last week's action by the Bank of Spain in buying pesetas to buoy the currency in the EMS grid helped sterling, by raising the effective floor for the UK unit in the mechanism.

● Speculation that Japan and the US might agree this week on a package of measures to raise the value of the yen against the dollar, pushed the pound slightly lower. This was on the grounds that an agreement to this effect, which might be discussed at the meeting of the Group of Seven leading industrial countries in Bangkok, might lead to a stronger D-Mark and weaken sterling in the EMS grid.

● The sluggish state of the UK economy, as measured by all the most recent indicators, has led to uncertainty about the strength of the expected upturn. This is despite the relatively upbeat assessment by the International Monetary Fund in its latest forecast for the UK, that the economy will expand by a robust 2.3 per cent next year, after contracting by 1.7 per cent next year. The ambiguity about the extent of the recovery has depressed sterling.

UK gilts yields

Restated at par (%)



Source: Warburg Securities

Looking back to the events of the summer – when gilts enjoyed a long rally as a result of high demand from the investment community – the Bank of England has released figures which cast light on a significant component of this demand. UK banks, which in recent years have been large net sellers of gilts, were net buyers of nearly £1bn-worth of the bonds in the three months to August.

It appears the banks decided to buy after realising they had become underweight in these instruments and also to take advantage of a rising market.

The extent to which gilt prices start to rise during the next month, after what has been a sluggish two weeks, may be tied up with whether the banks discover another burst of enthusiasm for the securities.

Peter Marsh

DUTCH BONDS

Tap issue shows worth by setting record

THE DUTCH government bond market focused last week on the Finance Ministry's successful use of the tap, or "counter", issue to raise a record sum from domestic and international investors.

The 8.75 per cent, 10-year bond – first launched in August when it raised Fl 6.75bn ($3.6bn) – was reopened on Monday to bring in a further Fl 6.5bn during five trading days, setting a high for the amount of money raised by a single Dutch state bond.

The Fl 13.25bn generated for the government confirms the usefulness of the tap mechanism, first tried in March 1990. It is designed to give the Finance Ministry's agent more flexibility than is offered by the usual "blind tender" method.

The tap issue is one of the innovations that the Finance Ministry has used to increase its flexibility and meet the changing needs of investors.

On Friday, the ministry's agent made use of this new flexibility to raise the price on the tap bond in incremental steps, from an opening 100.10 to a closing 100.40, for an effective yield at the day's end of 8.68 per cent. On Monday, the tap issue had been reopened at 99.8 per cent.

The additional Fl 6.5bn raised between Monday and Friday surprised the market because this was more than the government needed to fill the remaining hole in its 1991 borrowing requirement, of Fl 46.5bn.

Analysts said that the "over-funding" had enabled early redemption of some Treasury bills and some private placements.

Another unusual feature last week was the widening of the spread between Dutch and German yields to more than 40 basis points, compared with the more usual gap of between 20 and 30 points.

However, analysts said there were no clear-cut reasons for the size of the spread. Mr Tim Huizinga, an analyst at Pierson, Heldring & Pierson, said inflation figures were a partial explanation, with Dutch inflation in August showing a rise of 4.6 per cent, compared with 4.1 per cent in Germany. The annual Dutch inflation figure, however, is expected to be only slightly above that of Germany, he noted.

Inflation in the Netherlands, which once boasted the lowest rate in the European Community, is officially projected to rise to 3.25 per cent in 1991 and 1992 from an estimated 2.4 per cent in 1990 and 1.6 per cent in 1989. However, these projections, released by the Central Planning Office on budget day, September 17, are starting to look conservative because of a series of recent wage demands exceeding 4 per cent.

Other forecasts unveiled then also point to a worsening of economic performance, which complicates the government's efforts to stick to its deficit reduction targets.

Generally, however, the bond market took the budget in its stride. Although the 1991 borrowing requirement was revised to Fl 46.5bn from Fl 43.8bn, the increase did not reflect a deterioration in government finances but a trend towards early redemption of public and private loans carrying higher coupons.

Ronald van de Krol

US MONEY AND CREDIT

Traders still sure easing will come

SO THE cut did not come. Expectations that the Federal Reserve might take advantage of poor employment figures on Friday to ease monetary conditions had gripped the bond markets for much of last week.

But by the close of business on Friday evening no action had been taken, although the benchmark 30-year long bond still gained [illegible] to close with a yield of 7.78 per cent, the lowest since March 1987.

The conclusion is inescapable. The market is convinced that at least one more easing is on the way and is doing its best to push matters in that direction.

The employment figures were neither horrendous nor encouraging. Non-farm payrolls rose by 24,000 last month, while the unemployment rate fell by 0.1 percentage point to 6.7 per cent. That was slightly worse than the pundits had predicted: the average forecast was for a 37,000 increase in September payrolls.

But the figures did show one worrying trend. Manufacturing jobs fell away last month in significant numbers, after August's fairly sizeable rise.

Since this sector – supposedly boosted by stock rebuilding and export business – has presented the most optimistic picture within the economy, the decline looks ominous.

Moreover, a plethora of gloomy warnings in the run-up to the next quarterly reporting season could reinforce the doomsters' case.

Economic news earlier in the week added to the inconclusive pattern. The August leading indicators were flat, after rising for the six previous months, but the market was slightly jolted when the Commerce Department reported that new homes sales increased by 6.7 per cent in August, the sharpest rise in more than a year.

But total manufacturers' orders fell 1.9 per cent in August, having jumped 6.1 per cent in July.

The overall impression, then, is of an economy still edging forward, but only just – which gives the authorities plenty of scope to ease rates further, reasons the bond market.

All eyes, therefore, are now focused on this Friday, when the September producer price index will be published, with the same month's retail sales figures.

As for indications of official policy, the latest set of minutes released by the policy-setting Federal Open Market Committee were not revealing.

They showed that, at the August 20 meeting, members of the committee were unanimous in their decision to keep policy unchanged but "biased in favour of easing".

Some members favoured a proposal "to give greater emphasis to the behaviour of the monetary aggregates in guiding possible inter-meeting adjustments in policy". But the majority opted to stick with the existing priorities.

However, the discount rate was cut on September 13 and the Federal Reserve Board cited weakness in money supply growth as a reason.

But, if hopes of speedy action on the interest rate front were postponed, there was plenty happening on the "junk bond" front.

The catalyst was RJR Nabisco, the tobacco and food giant which was the subject of America's largest leveraged buy-out two years ago. For months, RJR Nabisco has been steadily refinancing its debt mountains – more than $29bn when the buy-out was completed – and introducing a larger equity base.

However, its latest "deleveraging" deal – which involves an early exchange of convertible preferred shares for common stock and a $1.88bn issue of preferred equity redemption cumulative stock (classed as equity) – took the market by surprise on Thursday.

If all goes smoothly, the deal will mean that RJR sheds its "highly leveraged transaction" status, while rating agencies may even upgrade some of its debt from the "junk" to "investment grade" category.

Although RJR shares slipped on the news, some of its high yield bonds rose, sending a euphoric surge through the junk bond market generally.

Psychologically at least, this boost to junk prices may bode well for Executive Life of California, the failed west coast insurer, which comes up for auction this week.

Bids for the troubled company – seized by the Californian insurance regulators in April – must be in by Friday and three parties have confirmed their interest. A fourth consortium is a likely runner.

Interest centres not on the insurer's battered policyholders, but on the company's vast junk portfolio, the largest single collection of non-investment grade bonds. So from the authorities' viewpoint, the junk market's latest surge could not be better-timed.

Nikki Tait

US MONEY MARKET RATES (%)

	Last Friday	1 week ago	4 wks ago	12-month High	12-month Low
Fed Funds (weekly average)	4.75	5.00	5.43	11.00	2.00
Three-month Treasury bills	5.15	5.27	5.44	8.29	5.27
Six-month Treasury bills	5.27	5.34	5.55	7.70	5.34
Three-month prime CDs	5.42	5.40	5.70	7.47	5.40
30-day Commercial Paper	5.27	5.40	5.58	9.95	5.40
90-day Commercial Paper	5.30	5.35	5.55	10.05	5.35

US BOND PRICES AND YIELDS (%)

	Last Fri.	Change on wk	Yield	1 week ago	4 wk. ago
Seven-year Treasury	105[illegible]	+[illegible]	7.14	7.28	7.56
20-year Treasury	114[illegible]	+[illegible]	7.66	7.70	7.95
30-year Treasury	103[illegible]	+[illegible]	7.78	7.82	8.01

Money supply: In the week ended September 23, M1 rose by $1.2bn to $870.7bn

FT/AIBD INTERNATIONAL BOND SERVICE

U.S. DOLLAR STRAIGHT	Issued	Bid price	Chg on week	Yield
ABBEY NATIONAL 8 7/8 93	150	103	+¼	6.57
ABN 9 1/8 94	200	104½	+¼	7.29
AETNA LIFE & CAS 7 3/4 16	200	100⅝		7.70
ALBERTA PROVINCE 8 5/8 96	750	104⅝	+½	7.53
ALBERTA PROVINCE 9 3/8 95	600	107	+½	7.32
AMERICAN EXPRESS 0 00	450	45¾	+⅛	8.85
AMERICAN GENERAL 9 3/4 95	100	104⅝	+⅛	8.36
AMERICAN INTL 0 04	750	34	+½	8.75
ASIAN DEV BANK 0 04	1000	34¾	+½	8.50
[illegible]				
QUEENSLAND GOVT 10 1/4 95	100	108⅝	+⅛	7.58
RALSTON PURINA 11 3/4 95	150	110⅛	+⅛	8.24
REED PUBLISHING 9 5/8 97	150	106	+⅛	8.26
REYNOLDS (RJ) 10 1/4 93	100	101⅛	+⅛	9.44
SAINSBURY 9 1/8 96	150	105⅛	+⅛	7.76
SARA LEE 9 3/8 93	150	104	+⅛	7.03
SAS 10 99	200	104½	+⅛	9.12
SAS 10 1/8 95	150	106½	+½	8.20
SBAB 9 1/2 95	500	106⅝	+½	7.34
SEAGRAM CO 8 1/2 96	100	100⅝	+⅛	8.31
SEARS O/S FIN 0 98	500	53⅝	+⅛	9.05
SEARS O/S FIN 11 5/8 93	150	107¼	+¼	7.69
SEARS ROEBUCK EURO 9 3/4 95	500	105⅝	+⅛	7.83
SNCF 7 1/4 94	175	101⅝	+⅛	6.45
SNCF 9 1/2 98	150	108⅝	+⅛	7.83
STATE BK NSW 8 1/2 96	200	102⅝	+⅛	7.77
STATE BK STH AUST 9 1/4 93	100	103¼	+¼	6.60
[illegible]				

SWISS FRANC STRAIGHTS	Issued	Bid price	Chg on week	Yield
ASIAN DEV BANK 6 10	100	88	-1	7.17
AUSTRIA 4 5/8 98	100	88½	-¼	6.91
CHUJITSUYA 7 3/4 95	50	100	-¼	7.74
COUNCIL EUROPE 4 3/4 98	250	87¾	-½	7.21
EEC 5 1/2 00	100	90	+¼	7.01
EIB 6 1/2 98	400	98¼		6.85
ELEC DE FRANCE 7 1/4 06	100	101½	-½	7.07
FINLAND 5 3/8 95	150	94	-½	7.12
GENERAL MOTORS 7 1/2 95	100	100½	+¼	7.31
[illegible]				

STRAIGHT BONDS: Yield to redemption of the bid-price. Amount issued is expressed in millions of currency units.
FLOATING RATE NOTES: US dollars unless indicated. Margin above six-month offered rate for US dollars. C.cpn = current coupon.
CONVERTIBLE BONDS: US Dollars unless indicated. Prem = percentage premium of the current effective price of buying shares via the bond over the most recent share price.
WARRANTS: Equity warrant prem = exercise premium over current share price. Bond warrant ex yld = exercise yield at current warrant price.

Closing prices on October 4

INTERNATIONAL CAPITAL MARKETS

SYNDICATED LOANS

Asda agrees fresh terms with lenders

ASDA, the UK's fourth largest grocery retailer, has renegotiated the terms on its syndicated loans with National Westminster Bank and Swiss Bank Corporation, the two institutions which arranged its main borrowing facilities.

Both banks have negotiated amendments to the pricing and the covenants on the loans and have submitted the changed terms to the participating banks for approval.

Although some investors were surprised by the extent of Asda's financial problems when these were announced last week, the lenders are expected to agree to the terms.

Asda's £357m rights issue is conditional on the participating banks agreeing to the amendments.

In turn, NatWest and SBC have agreed two-year £200m committed facilities for Asda which are conditional on the rights issue going ahead.

One of the main concerns has been the interest cover ratio agreed in the covenant. The ratio is a measure of profit before interest and taxes which will be available to service interest on the debt. Asda was in danger of breaching this covenant, the terms of which have now been amended.

According to Asda, "the situation had the potential to put in jeopardy the group's longer-term banking commitments and also to limit severely the group's ability to refinance those borrowings which mature in the near future". These include facilities due for repayment this month and next and a convertible bond issue which is due for redemption in April 1992 at a cost of £133m.

The other main amendment has been an increase in the total pricing on the loan to reflect market conditions more closely, although details have not been released.

Asda's loans consist of a five-year £500m multi-option facility (arranged by NatWest, of which £200m was committed), and a £320m transferable term loan facility (arranged by Swiss Bank Corporation, of which £260m remains).

Both loans were arranged in October 1989 when pricing levels were between a half and a third of current figures, so by today's standards, the original pricing on the loans was very aggressive.

Originally the transferable term loan for £320m paid 12.5 basis points above the London interbank offered rate on its one-year tranche, 17.5 basis points on a two-year tranche, and 20 basis points on a three-year tranche.

Of the £260m outstanding, £128m is due for repayment on October 16.

The original terms for the multi-option facility were never publicised, but are thought to have consisted of the following: facility fees of 7.5 basis points, a margin of 18.75 basis points and a utilisation fee of 5 basis points. Although the pricing on these loans has now been increased, neither the maturity nor the size of the two loans is being changed.

● The New Zealand debt management office has awarded the mandate for a $150m five-year revolving credit facility to Lloyds Bank. The deal goes into syndication this week.

The facility will be used to support New Zealand's Euro and US commercial paper programmes, which each have a A1+/P1 rating.

To maintain a top rating on its short-term debt, New Zealand has to keep a credit facility in place. The new facility replaces one which expires in November.

New Zealand's debt carries a zero weighting for capital adequacy purposes, which Lloyds believes will increase the "palatability" of the facility among banks.

Sara Webb

EUROMARKET TURNOVER ($m)

Primary Market

	Straights	Conv	FRN	Other
US$	2,721.8	65.0	30.0	18,877.4
Prev	1,100.0	0.0	432.0	12,478.8
Other	3,989.0	0.0	1,309.2	8,440.5
Prev	3,913.5	0.0	172.2	5,830.7

Secondary Market

	Straights	Conv	FRN	Other
US$	24,337.2	938.0	13,392.5	13,203.1
Prev	20,502.6	856.9	9,364.6	9,294.5
Other	55,612.7	946.6	4,452.8	69,364.0
Prev	50,583.3	1,466.8	3,847.4	70,601.5

	Cedel	Euroclear	Total
US$	27,344.7	46,220.3	73,565.0
Prev	18,096.3	35,933.1	54,029.4
Other	54,841.6	89,267.2	144,108.8
Prev	47,030.7	89,384.7	136,415.4

Week to October 3, 1991

Source: AIBD

INTERNATIONAL BONDS

Volatility knocks investor confidence in Ecu sector

TURMOIL in the Ecu bond market at the end of last week, sparked by speculation on the future form of the European currency unit, may have knocked investor confidence in the sector.

Prices in 10-year Ecu Eurobonds slid ¾ point in a wave of selling on Thursday. But the volatile conditions which prevailed during the sell-off have raised doubts about the market.

The Ecu bond market has grown dramatically in the last few years. The volume of new issues in the first nine months of 1991 reached Ecu23.5bn, compared with Ecu14bn for the whole of 1990.

However, the market is still small, and, as some investors have discovered to their cost, immature.

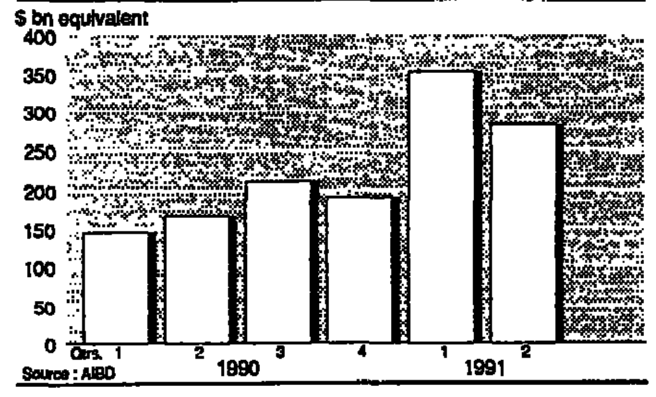
The sell-off on Friday and the accompanying volatility, was generated as much by rumour as by fact, as different versions of speeches circulated on the future of the currency.

Speeches by representatives of the Banque de France and the Spanish Treasury on Wednesday, suggesting their respective governments favoured a freezing, rather than a hardening, of the Ecu, were interpreted as shattering news for the Ecu bond market. Traders seemed to grasp the remarks because there was already a feeling that the market was overbought.

Ecu bonds had returned to favour in September, as traders and sales people extolled the notion of "convergence" – the lowering of interest rates in many European countries as their economies move closer together. The sales story of the month appears to have been the hardening of the Ecu, which would speed up convergence. (The process of convergence would still take place, although more slowly, without a hard Ecu, economists believe.)

The hard Ecu story had fuelled aggressive buying of Ecu bonds by many arbitrageurs, who wanted to "buy convergence" in the same way as they might take a positive view on the spread between, say, the German bund and the French government bond market.

Ecu Eurobond turnover



So, probably in the realisation that the market was overbought, considering the uncertainty over the currency's future, the mood turned to panic as investors tried to dump bonds.

Traders say there are several reasons why the market coped poorly. First, Ecu bonds – or at least, the benchmark bonds issued by governments and supranational agencies which make up the theoretically liquid portion of the market – are concentrated in the hands of a small number of investors, comprising mainly European central banks and large UK trading accounts. Thus, the impact on price movements of one seller was exaggerated.

Traders were also busy trying to offload their own positions. "Inventory levels among market-makers were very high," following a spate of new issues in September, according to one syndicate manager, "and the depth of market-making was not what it seemed". There are now nearly 40 Ecu bond-reporting dealers (market-makers), but many are new entrants who are less active than their market-making status would suggest.

According to several traders, sell-orders became hard to put through, as the market's difficulties were exacerbated by a number of traders leaving their posts to watch England's first-round Rugby World Cup match against New Zealand.

"The trading conditions can only lead one to conclude that the market is not as liquid as some would like to claim. It has been dressed up as a government bond market, but it is still very much a Eurobond market," said one.

As a result several accounts have been quite badly burned. However, for most participants, any losses were far outweighed by gains during the last year or so. The Ecu bond market has far outstripped returns in the bund market, for example: the spread between the 10-year Ecu bond yield, based on the Paribas Liquid Ecu bond index, narrowed from 230 basis points at the beginning of 1990 to 50 at the beginning of May, before the market sold off during the summer. Last month, the spread tightened from 60 to 40 basis points, an improvement which was reversed at the end of last week.

But concern about the liquidity of the market may dampen enthusiasm for the sector.

On Friday, the market stabilised, but dealers said investors remained cautious.

"A number of accounts think that, on a relative value basis, the market should be bought. But they are nervous of being caught again," said one trader.

So far the second tier of Ecu Eurobonds, made up of corporate bonds held mainly by retail investors, has held up quite well. Prices were marked down, but there was relatively little trading.

Other European markets have benefited. In particular, traders said there had been switching from Ecu into German bunds and French government bonds.

Tracy Corrigan

NEW INTERNATIONAL BOND ISSUES

Borrowers	Amount m.	Maturity	Av. life years	Coupon %	Price	Book runner	Offer yield %
US DOLLARS							
Ciba Geigy Corp(f)♦†	150	1998	7	5½	100	Goldman Sachs	5.500
Coca-Cola Amatil†	175	1996	5	7⅝	99.66	Morgan Stanley	7.710
Kangwon Ind.(j)§†	40	2006	14⅔	3⅛	100	Jardine Fleming Int.	3.124
LM Ericsson†	150	1996	5	7⅞	101.425	Morgan Stanley	7.523
First Mexican Accept.(o)†	40	1996	5	8¾	98⅝	Deutsche Bk Cap.Mkts.	-
ECUs							
Municipality Finance†	240	1996	5	9⅛	101.70	Goldman Sachs	8.691
Morinaga Milk Industry♦	80	1995	4	6⅛	100	Nikko Secs.	6.125
CANADIAN DOLLARS							
British Gas Int.Finance†	200	2001	10	9½	101⅛	Deutsche Bk Cap.Mkts.	9.322
Province of Ontario†	750	2001	10	9¾	99.56	ScotiaMcLeod Inc.	9.821
National Bk Mortgage Corp†	150	1996	5	9¾	101.525	Wood Gundy Inc.	9.354
Ciba-Geigy Corp†	150	1996	5	9¼	101.45	UBS Phillips & Drew	8.878
Guinness BV†	150	1998	7	9⅝	101.475	CSFB	9.329
C.Cent.Desjardins d'Quebec†	100	1996	5	9⅝	101.525	Wood Gundy	9.231
AUSTRALIAN DOLLARS							
European Investment Bk†	400	2001	10	10.33	89.493	Hambros Bank	10.408
SBC Finance (Cay.Is.)†	100	1998	7	10¼	101.54	SBC	9.934
Sth.Aust.Govt.Fin.Auth.†	125	1998	7	10½	100½	Hambros Bank	10.396
McDonald's Aust.Prop.†	85	1998	7	10½	100.70	Deutsche Bk Cap.Mkts.	10.355
D-MARKS							
Yahagi Construction(a)♦†	100	1995	4	5⅞	100	Daiwa Europe GmbH	5.875
Suminoe Textile Co.(b)♦†	100	1995	4	5⅞	100	WestLB	5.875
Inter-American Devt.Bk†	400	1993	2	8¾	100.92	Deutsche Bank	8.232
Republic of Turkey†	300	1996	5	10¾	101	Commerzbank	10.483
Dresdner Finance BV†	300	1996	5	8½	101½	Dresdner Bank	8.123
SWISS FRANCS							
Uni-Charm Corp(c)★★♦	100	1995	-	5	100	Credit Suisse	5.000
Nippon Concrete Ind.(g)★★♦	50	1995	-	4¾	100	Yamaichi Bk (Switz)	4.750
Sanko Sangyo(h)★★§	25	1996	-	4½	100	SBC	4.551
Nippon Piston Ring(k)★★§	60	1996	-	4¼	100	Credit Suisse	4.295
Tsukamoto Shoji(l)★★§	30	1996	-	4¼	100	Nikko (Switz) Fin.	4.245
Kawasaki Kisen Keisha★★†	100	1996	-	7⅝	99⅝	Credit Suisse	7.625
PESETAS							
World Bank(d)†	15bn	1996	5	11	101⅜	Banesto	10.631
Nordic Investment Bk(e)†	5bn	1994	3	zero	100	JP Morgan	-
DANISH KRONER							
Bacob Finance NV†	300	1993	2	10	101⅝	Unibank	9.075
YEN							
Toshiba Corp†	30bn	1999	8¼	6¾	101¼	Nikko Secs.	6.521
Toshiba Corp†	30bn	1997	5¼	6¾	101⅜	Nomura Int.	6.424
Hino Motors†	*20bn*	*1998*	*6¼*	*6.9*	*101.20*	*Yamaichi Int.*	*6.651*
Toho Gas†	10bn	2002	10¼	6⅞	101½	Daiwa Europe	6.663
Inter-American Devt.Bk†	35bn	2001	10	6	100.20	Bk of Tokyo Cap.Mkts.	5.973
Credit Local de France†	40bn	2001	10	6	99.80	Daiwa Europe	6.027
Bank of Greece(n)†	50bn	2000	9	7.1	100½	Nomura Secs.	7.023
LUXEMBOURG FRANCS							
Banque Indosuez (Paris)†	1.5bn	1999	8	9¼	102¼	BGL	8.846
Helaba Luxembourg(i)†	1bn	1998	7	9⅜	102.20	BCEE	8.939
NMB Postbank†	1.5bn	1998	6.167	9¼	102	KBL	8.805
Saab Scania Fin.Int.†	1bn	1996	4.167	9½	102	BIL	8.888
Pabelfima★★†	600	1998	7	9⅜	101.90	BGL	8.998
KBL Int.Fin.(m)†	1.5bn	1999	8	9¼	102.10	KBL	8.872
Banque UCL★★†	750	1994	2⅓	9⅝	101.93	Banque UCL	8.633

★★Private placement. §Convertible. ♦With equity warrants. ‡Floating rate note. ♠Variable rate notes. †Final terms. a) Exercise premium fixed at 2.5%. *Non-callable. b) Exercise premium fixed at 2.50%. Non-callable. c) Callable 17/10/93 at 101% declining ½% annually. Exercise premium* fixed at 2.5%. d) Matador issue. Non-callable. e) Matador issue. Redemption linked to FIEX-35 index of Spanish stocks. Non-callable. f) Subordinated issue. Exercise premium fixed at 3.4%. g) Callable 17/4/93 at 101¼% declining ¼% semi-annually. h) Put option 30/9/93 at 105⅞% to yield 7.38%. Coupon payable semi-annually. i) Subordinated issue. Non-callable. j) Put option 1996 at 122.11% to yield 6.98%. Conversion premium fixed at 21.9%. k) Put option 31/3/94 at 108⅞% to yield 7.436%. Coupon payable semi-annually. l) Put option 31/3/94 at 108⅛% to yield 7.513%. m) Amount increased from LFr1bn. Callable 1996 at 101½%, 1997 at 101% and 1998 at 100½%. n) Samurai issue. Non-callable. o) Coupon payable semi-annually. Callable at par. Note: Yields are calculated on AIBD basis.

WORLD STOCK MARKETS

INDICES

NEW YORK

DOW JONES	Oct 4	Oct 3	Oct 2	Oct 1	1991 HIGH	1991 LOW	Since compilation HIGH	Since compilation LOW
♦Industrials	2961.76	2984.79	3012.52	3018.34	3055.23 (28/8)	2470.30 (9/1)	3055.23 (28/8/91)	41.22 (2/7/32)
Home Bonds	97.30	97.14	97.10	97.20	97.30 (4/10)	91.30 (16/1)	97.30 (4/10/91)	54.99 (1/10/81)
Transport	1187.59	1198.43	1201.79	1195.87	1241.89 (3/6)	894.30 (7/1)	1532.01 (5/9/89)	12.32 (8/7/32)
Utilities	212.63	213.19	213.63	212.63	220.89 (16/4)	195.17 (10/7)	236.23 (2/1/90)	10.50 (8/4/32)

♦Day's High 3007.16 (3021.24) Low 2956.17 (2972.50)

STANDARD AND POOR'S

	Oct 4	Oct 3	Oct 2	Oct 1	1991 HIGH	1991 LOW	Since compilation HIGH	Since compilation LOW
Composite ‡	381.25	384.47	388.26	389.20	396.64 (28/8)	311.49 (9/1)	396.64 (28/8/91)	4.40 (1/6/32)
Industrials	450.59	454.03	458.49	459.86	472.01 (29/8)	364.90 (9/1)	472.01 (29/8/91)	3.62 (21/6/32)
Financial	30.84	31.15	31.77	31.80	32.24 (14/8)	21.96 (9/1)	35.24 (9/10/89)	8.64 (1/10/74)
NYSE Composite	210.22	211.73	213.60	214.01	217.17 (28/8)	170.97 (9/1)	217.17 (28/8/91)	4.46 (25/4/42)
Amex Mkt. Value	371.47	373.02	375.56	374.95	374.95 (1/10)	296.72 (14/1)	397.03 (10/10/89)	29.31 (9/12/72)
NASDAQ Composite	520.40	520.51	526.33	528.51	528.51 (1/10)	355.75 (14/1)	528.51 (1/10/91)	54.87 (31/10/72)

	Sep 27	Sep 20	Sep 13	year ago (approx.)
Dow Industrial Div. Yield	3.08	3.04	3.07	4.14

	Oct 2	Sep 25	Sep 18	year ago (approx.)
S & P Industrial div. yield	2.74	2.73	2.73	3.49
S & P Ind. P/E ratio	21.14	21.14	21.15	14.55

NEW YORK ACTIVE STOCKS

Friday	Stocks traded	Closing price	Change on day
RJR Nabisco	7,076,200	10¼	- ¼
Amer Express	6,272,700	21¼	- 1¼
Chrysler	2,913,700	10½	+ ¾
Amer T & T	2,869,700	36¼	- ⅞
Global Marine	2,387,700	3¾	+ ¼
Nat'l Med Ent.	1,841,300	20¼	- ⅝
Advanced Micro	1,666,700	9	+ ⅛
Telefonica	1,469,500	33½	+ ½
IBM	1,317,100	98¼	- ⅞
Upjohn	1,282,600	43⅝	- ⅞

TRADING ACTIVITY

† Volume (Millions)	Oct 4	Oct 3	Oct 2
New York SE	163.920	174.230	169.290
Amex	10.956	12.867	13.108
NASDAQ	151.232	179.367	179.610
NYSE			
Issues Traded	2,087	2,075	2,120
Rises	655	506	773
Falls	896	1,060	833
Unchanged	536	509	514
New Highs	88	94	156
New Lows	24	23	16

CANADA

TORONTO	Oct 4	Oct 3	Oct 2	Oct 1	1991 HIGH	1991 LOW
Metals & Minerals	2779.61	2804.84	2836.52	2856.23	3299.99 (18/7)	2632.06 (9/1)
Composite	3378.90	3393.28	3393.59	3395.26	3582.07 (7/6)	3161.95 (15/1)
MONTREAL Portfolio	1789.47	1799.17	1800.72	1803.43	1903.86 (7/6)	1686.89 (9/1)

Base values of all indices are 100 except NYSE All Common – 50; Standard and Poor's – 10, and Toronto Composite and Metals – 1000. Toronto indices based 1975 and Montreal Portfolio 4/1/83. † Excluding bonds. ‡ Industrial, plus Utilities, Financial and Transportation. (c) Closed (u) Unavailable.

	Oct 4	Oct 3	Oct 2	Oct 1	1991 HIGH	1991 LOW
AUSTRALIA						
All Ordinaries (1/1/80)	1587.0	1585.6	1581.8	1586.4	1591.3 (7/8)	1284.5 (16/1)
All Mining (1/1/80)	649.2	651.9	652.7	658.1	707.2 (24/7)	561.6 (16/1)
AUSTRIA						
Credit Aktien (30/12/84)	451.14	455.84	457.47	458.40	534.81 (16/4)	390.84 (15/1)
BELGIUM						
BEL20 (1/1/91)	1096.31	1094.47	1088.08	1089.84	1212.15 (17/4)	917.59 (17/1)
DENMARK						
Copenhagen SE (3/1/83)	361.47	364.40	365.73	365.88	380.04 (2/8)	302.26 (8/1)
FINLAND						
HEX General (28/12/90)	855.1	848.4	843.3	853.4	1186.9 (8/4)	843.3 (2/10)
FRANCE						
CAC General (31/12/82)	491.60	495.90	497.62	497.20	497.62 (2/10)	394.88 (15/1)
CAC 40 (31/12/87)	1851.91	1867.11	1878.25	1887.29	1887.29 (1/10)	1425.26 (15/1)
GERMANY						
FAZ Aktien (31/12/58)	661.15	(c)	661.91	664.78	717.43 (17/6)	570.48 (15/1)
Commerzbank (1/12/53)	1845.0	(c)	1855.3	1869.2	2035.2 (31/5)	1612.5 (15/1)
DAX (30/12/87)	1601.73	(c)	1607.32	1609.62	1715.80 (11/6)	1311.82 (16/1)
HONG KONG						
Hang Seng Bank (31/7/64)	4067.69	4093.41	4062.07	4023.84	4093.41 (3/10)	2984.81 (16/1)
IRELAND						
ISEQ Overall (4/1/88)	1438.47	1435.43	1435.21	1443.84	1520.65 (15/3)	1114.86 (25/1)
ITALY						
Banca Com. Ital. (1972)	539.03	544.60	548.33	543.65	619.38 (3/6)	486.26 (29/1)
JAPAN						
Nikkei (16/5/49)	24596.90	24711.44	24375.11	24377.01	27146.91 (18/3)	21456.76 (19/8)
Tokyo SE (Topix) (4/1/68)	1883.32	1882.74	1862.04	1851.07	2028.85 (18/3)	1625.89 (17/1)
2nd Section (4/1/68)	2898.36	2907.52	2904.22	2900.63	3423.45 (10/5)	2473.52 (24/1)
MALAYSIA						
KLSE Composite (4/4/86)	513.11	518.20	521.77	521.81	635.02 (29/5)	478.41 (16/1)
NETHERLANDS						
CBS Ttl Rtn.Gen.(End 1983)	275.7	275.7	276.9	276.9	284.8 (5/6)	221.4 (16/1)
CBS All Shr (End 1983)	194.0	194.0	194.4	194.7	203.1 (5/6)	162.3 (16/1)
NORWAY						
Oslo SE (Ind) (2/1/83)	740.28	742.80	758.41	755.76	793.53 (26/8)	610.45 (21/1)
PHILIPPINES						
Manila Comp (2/1/85)	988.27	960.31	950.40	941.11	1183.40 (29/5)	582.64 (18/1)
SINGAPORE						
SES All-Singapore (2/4/75)	373.79	374.69	375.44	375.34	422.43 (26/4)	315.87 (16/1)
SOUTH AFRICA						
JSE Gold (28/9/78)	1168.0	1160.0	1140.0	1133.0	1469.0 (5/7)	971.0 (25/2)
JSE Industrial (28/9/78)	4061.0	4048.0	3983.0	3966.0	4237.0 (10/9)	2829.0 (16/1)
SOUTH KOREA**						
Korea Comp Ex. (4/1/80)	720.53	(c)	705.18	706.63	763.10 (6/8)	598.57 (22/6)
SPAIN						
Madrid SE (30/12/85)	265.31	267.41	269.02	271.96	289.22 (18/3)	213.70 (14/1)
SWEDEN						
Affarsvarlden Gen (1/2/37)	1029.3	1039.1	1026.4	1035.9	1149.8 (11/7)	808.4 (8/1)
SWITZERLAND						
Swiss Bank Ind. (31/12/58)	744.6	743.6	744.4	741.3	769.2 (29/8)	590.4 (14/1)
SBC General (1/4/87)	615.1	614.4	614.5	618.6	638.0 (31/5)	487.1 (14/1)
TAIWAN**						
Weighted Price (30/6/66)	4742.71	4726.15	4830.13	4858.44	6305.22 (9/5)	3316.26 (15/1)
THAILAND						
Bangkok SET (30/4/75)	664.47	643.99	654.69	665.93	908.13 (19/4)	582.48 (16/1)
WORLD						
M.S. Capital Intl.(1/1/70) ($)	521.9*	522.3	521.5	519.3	529.2 (17/4)	439.1 (16/1)

**Saturday September 28: Taiwan Weighted Price: (c). Korea Comp Ex. 691.74
‡ Subject to official recalculation. *Calculated at 15.00 GMT.
Base values of all indices are 100 except: BEL20, HEX General, ISEQ Overall and DAX – 1,000, JSE Gold – 255.7, JSE 26 Industrials – 264.3 and Australia All Ordinary and Mining – 500; (c) Closed, (u) Unavailable.

TOKYO - Most Active Stocks

Friday 4 October 1991

	Stocks Traded	Closing Prices	Change on day
Topy Ind	18.4	787	+50
Nissan Chemical	17.7	1,030	0
Sanyo Electrical	8.4	587	+27
Daicel Chemical	7.6	717	+36
Hitachi Zosen	7.5	708	-15
Honshu Paper	6.3	888	-2
Osaka Gas	6.1	609	-3
Tokyo Gas	4.9	614	+6
Dowa Mining	4.7	690	+9
Meiji Seika	4.6	1,260	-30

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AUTHORISED UNIT TRUSTS

Guide to pricing of Authorised Unit Trusts

Compiled with the assistance of Lautro §§

INITIAL CHARGE: Charge made on sale of units. Used to defray marketing and administrative costs, including commission paid to intermediaries. This charge is included in the price of units.

OFFER PRICE: Also called issue price. The price at which units are bought by investors.

BID PRICE: Also called redemption price. The price at which units are sold back by investors.

CANCELLATION PRICE: The minimum redemption price. The maximum spread between the offer and bid prices is determined by a formula laid down by the government. In practice, most unit trust managers quote a much narrower spread. As a result, the bid price is often well above the cancellation price. However, the bid price might be moved to the cancellation price by the managers at any time, usually in circumstances in which there is a large excess of sellers of units over buyers.

TIME: The time shown alongside the fund manager's name is the time of the unit trust's valuation point unless another time is indicated by the symbol alongside the individual unit trust name. The symbols are as follows: (♥) - 0001 to 1100 hours; (♣) - 1101 to 1400 hours; (♦) - 1401 to 1700 hours; (♠) - 1701 to midnight. Daily dealing prices are set on the basis of the valuation point; a short period of time may elapse before prices become available.

HISTORIC PRICING: The letter H denotes that the managers will normally deal on the price set on the most recent valuation. The prices shown are the latest available before publication and may not be the current dealing levels because of an intervening portfolio revaluation or a switch to a forward pricing basis. The managers must deal at a forward price on request, and may move to forward pricing at any time.

FORWARD PRICING: The letter F denotes that the managers deal at the price to be set on the next valuation. Investors can be given no definite price in advance of the purchase or sale being carried out. The prices appearing in the newspaper are the most recent provided by the managers.

SCHEME PARTICULARS AND REPORTS: The most recent report and scheme particulars can be obtained free of charge from fund managers.

Other explanatory notes are contained in the last column of the FT Managed Funds Service.

§§ Life Assurance and Unit Trust Regulatory Organisation,
Centre Point,
103 New Oxford Street, London WC1A 1QH
Tel: 071 – 379 – 0444.

For MIM Britannia see INVESCO MIM

For Geoffrey Morley see Commercial Union

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Unit Name	Init Chrge	Canc. Price	Bid Price	Offer Price	Yield Gr's	City-line
Sovereign Unit Tst Mngrs Ltd (1000)F						
12 Christchurch Rd, Bournemouth					0202 298422	
Cash	1	51.26	51.26	51.77	10.6	45246
Cnsrild Primace	5¼	48.60	48.86	52.12	0.20	46075
Ethical	5¼	50.50	51.49xd	54.78	4.59	46948
European Growth	5¼	46.94	46.94	50.06	3.5	—
Income	5¼	48.20	48.68	51.93	7.24	41394
Intl Growth	5¼	64.26	64.74	69.06	3.30	41395
Managed	5¼	59.15	59.81	63.80	4.36	41396
UK Growth	5¼	52.55	53.12	56.66	5.34	41397
Standard Chartered Equitor (1200)F						
69 Old Broad Street, EC2M 1QS					071-280 6521	
Mngd Exempt Acc	3	198.2	200.5	208.8	2.95	41499
Do Income	3	189.2	191.4	199.3	2.95	41321
Standard Life Tst Mgmt Ltd (0629)H						
3 George St, Edinburgh EH2 2XZ					0800 393777	
Managed Acc	5¼	36.54	36.54	38.83	2.31	41398
UK Equity Gth Acc	5¼	49.01	49.92	53.04	1.91	41399
UK Eq High Inc Inc	5¼	34.38	35.09xd	37.29	5.30	41400
UK Eq High Inc Acc	5¼	38.65	39.46	41.93	5.20	46962
UK Equity Gen Acc	5¼	47.70	48.46	51.49	2.84	41401
UK Equity Gen Inc	5¼	37.33	37.92xd	40.29	2.84	41402
UK Larger Cos Acc F	7¼	309.5	313.4	340.1	4.28	41403
UK Larger Cos Inc F	7¼	249.2	252.4xd	273.9	4.28	41404
Gilt & Fxd Int Inc	5¼	27.43	27.50xd	29.09	8.20	41405
O'seas Lrg Cos Acc F	7¼	214.8	218.9	237.6	2.12	41406
Nth American Acc	5¼	34.03	34.23	36.37	0.71	41407
Far East Acc	5¼	42.12	43.20	45.91	0.17	41408
European Acc	5¼	33.42	35.11	37.31	1.75	41409
Stewart Ivory Unit Tst Mgrs Ltd (1200)H						
45 Charlotte Sq, Edinburgh					031-226 3271	
American ♥	5	290.6	290.6	310.0	1.36	41410
(Accum Units) ♥	5	340.0	340.0	362.7	1.36	41411
British	5	831.6	841.6	890.4	5.38	41416
(Accum Units)	5	1366.3	1382.7	1462.9	5.38	41417
European	5	322.8	322.8	343.7	1.52	41418
(Accum Units)	5	349.9	349.9	372.5	1.52	41419
Japan	5	119.4	119.4	126.9	—	41420
(Accum Units)	5	120.3	120.3	127.9	—	41421
New Pacific	5	164.8	164.8	175.2	1.99	46536
(Accum Units)	5	169.2	169.2	179.9	1.99	47954
PEP Oct 2	5	146.0	148.1	156.8	3.58	47588
Mngd Equity	5	123.8	125.8	133.1	3.47	47586
Mngd Equity Acc	5	131.3	133.4	141.2	3.47	48566
Mngd Cash	5	95.45	95.45	98.30	10.28	47585
(Accum Units)	5	115.4	115.4	118.8	10.28	48267
Mngd Fixed Int Acc Aug 28	5	123.0	123.0	130.4	6.74	42152
Majority Stg	1	99.48	99.48xd	100.46	10.05	42700

	Bid Price	Offer Price	Yield Gross	City-line
Funds in Court*				
Capital Oct 3	496.84	500.54xd	2.82	40505
Gross Oct 3	190.05	191.58	10.18	40506
High Yield Oct 3	300.19	302.61	7.27	40507
* Restricted to monies under Court control				
Henderson Unit Trust Management Ltd				
Pensions Mngd.	53.31	54.64xd	3.64	40676
INVESCO MIM Management Ltd				
Exempt Funds				
Intl Mngd P' Folio.	1202	1297	—	46964
Mngd Pens (Acc).	71.9	76.6	—	41007
Lazard Brothers & Co. Ltd				
Property Sept 5	£2,488.0	2,601.8	6.00	40777
Inc Gth Prp Apr 16	£1,325.0	1,460.0	7.20	40778
Lazard Investors Ltd ##				
Exempt Funds				
Small Co's Oct 3	£3920.0	4092.6	3.98	40766
European Oct 3	£541.0	546.7	2.08	40776
American Oct 3	£352.9	356.4	2.28	40773
Japan Oct 3	£522.4	528.5	1.23	40774
Pacific Oct 3	£138.2	141.7	1.95	40775
W Midlands Aug 30	£144.50	161.30	2.48	40771
Local Authorities Mutual Invest. Tst.*				
2 Fore Street, London EC2Y 5AQ		071-588 1815		
Property Sep 30	193.05	196.90	7.81	40825
Equity Aug 31	915.40	928.20	3.82	40826
* Available only to Local Authorities				
M & G Securities Ltd				
Charibond Oct 3	104.56		10.32	40883
(Accum Units)	600.82		10.32	40884
NAACIF Oct 1	43.64		9.01	46917
Morgan Grenfell Unit Trust Managers Ltd				
Exempt Funds				
UK Equity † Oct 1	130.5	139.6	3.67	46925
UK Small Co † Oct 1	546.4	594.4	3.38	46926
Fixed Interest † Oct 1	111.6	117.4	8.50	46928
US Small Co Oct 1	159.6	170.7	0.00	46927
Managed Oct 1	109.5	117.0	3.37	46924
Intl Bond Oct 1	115.8	122.2	10.51	47790
Japan Oct 1	73.42	80.67	0.36	47877
European Oct 1	87.45	93.57	1.98	47876
Nth American Oct 1	108.7	116.9	2.36	47878
Murray Johnstone UT Mngmt				

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INSURANCES

[illegible]

OTHER UK UNIT TRUSTS

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Continued on next page

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N & P Life Assurance Ltd
6-7 Bedford Row, London, WC1R 4UJ 071-430 2348

	Bid Price	Offer Price	Yield Gross	City-line
Life Managed Fd	109.3	115.0	–	41924
Pension Managed Fd	108.7	114.4	–	41926
Life Deposit Fd	109.8	115.6	–	41923
Pension Deposit Fd	116.0	122.2	–	41925

For National Fin see Target Life

National Mutual Life
The Priory, Priory Pk, Hitchin, SG5 2DW 0462 422422

	Bid Price	Offer Price	Yield Gross	City-line
Managed	168.9	177.8	–	43141
UK Equity	182.2	191.8	–	43135
Overseas Equity	131.4	138.4	–	43136
Fixed Interest	153.4	161.5	–	43137
Property	137.2	144.5	–	43138
Index Linked	151.1	159.1	–	43139
Deposit	162.0	170.6	–	43140
With Profits (B)	132.5	139.6	–	44128

National Provident Institution
48 Gracechurch St, London EC3P 3HH 071-623 4200

	Bid Price	Offer Price	Yield Gross	City-line
Managed	360.1	379.1	–	43163
UK Equity	460.0	484.5	–	43164
Overseas Eq	342.9	361.0	–	43165
American	281.8	296.7	–	43166
Far East	378.5	398.5	–	43167
Property	194.8	205.1	–	43168
Fixed Int	269.7	283.9	–	43169
Indexed Gilt	160.6	169.1	–	43170
Deposit	186.1	195.9	–	43171
With Profit	103.5	109.0	–	44771
Pension Fund (Accum Units)				
Managed	518.1	545.4	–	43173
UK Equity	621.4	654.2	–	43175
Overseas Eq	577.4	607.8	–	43177
American	357.3	376.2	–	43179
Far East	618.0	650.6	–	43181
Property	247.7	260.8	–	43183
Fixed Int	337.3	355.1	–	43185
Indexed Gilt	175.4	184.7	–	43187
Deposit	262.9	276.8	–	43189

Providence Capitol Life Assc. Co Ltd
2 Bartley Way, Hook, Hants RG27 9XA 0256 768888

	Bid Price	Offer Price	Yield Gross	City-line
UK Equity Acc.	233.0	245.8	–	43411
UK Fixed Int Acc.	186.5	196.8	–	43412
Intl Equities Acc.	173.9	183.5	–	43413
UK Managed Acc.	177.4	187.1	–	43414
Property Acc	226.5	239.0	–	43415
Money Acc.	131.8	139.1	–	43416
Special Market Acc.	147.6	155.7	–	43417
Japan Equity Acc.	105.3	111.1	–	46760
North American Acc	101.8	107.4	–	43419
Pacific Acc.	93.4	98.6	–	43420
Technology Acc.	121.1	127.8	–	43421
Nat Resources Acc.	54.3	57.3	–	43422
European Acc.	100.4	106.0	–	43424
Residential Prop Acc.	94.6	99.8	–	43425
Swiss Equities Acc.	33.6	35.5	–	43426
Hong Kong Acc.	67.7	71.5	–	43427
UK High Inc Eq Acc.	76.4	80.6	–	43428
Int Fixed Interest Acc.	59.8	63.1	–	46406
Int Managed Acc.	56.4	59.4	–	46407
HIP Managed Acc.	117.6	124.0	–	46751
HIP Managed II Acc.	103.2	108.8	–	41928
HIP Managed III Acc.	110.2	116.2	–	45881
Total Investment Bond				
UK Equity Initial		158.2	–	43429
UK Fixed Int Initial		126.9	–	43430
Intl Equities Initial		117.4	–	43431
UK Managed Initial		120.7	–	43432
Property Initial		155.1	–	43433
Money Initial		90.1	–	43434
Special Market Initial		114.5	–	43435
Japan Equity Initial		81.7	–	46762
North American Initial		78.9	–	43437
Pacific Initial		72.4	–	43438
Technology Initial		93.9	–	43439
Nat Resources Initial		42.1	–	43440
European Initial		90.0	–	43442
Residential Prop Init.		90.2	–	43443
Swiss Equities Initial		32.0	–	43444
Hong Kong Initial		64.6	–	43445
UK High Inc Eq Init.		72.9	–	43446
Int Fixed Interest Init.		57.8	–	46408
Int Managed Init.		54.7	–	46409
HIP Managed Init.		114.2	–	46752
HIP Managed II Initial		101.5	–	41927
HIP Managed III Init.		109.5	–	45882

Royal Heritage Life Assurance Ltd—Contd.

	Bid Price	Offer Price	Yield Gross	City-line
Perpetual Funds				
International Growth	115.1	121.2	–	43700
Income	118.0	124.3	–	43701
American Growth	135.1	142.3	–	43703
Intl Emerging Cos	130.5	137.4	–	43704
Far East Growth	154.0	162.2	–	43705
European	132.8	139.8	–	43706
Managed	132.3	139.3	–	43707
TSB Funds				
Income	118.7	125.0	–	43713
Managed	142.9	150.5	–	43718

Royal Life Insurance Ltd
New Hall Place, Liverpool L69 3HS 051-239 3000

	Bid Price	Offer Price	Yield Gross	City-line
Royal Shield Fd	721.9	763.9	–	43812
Royal Life (Unit Linked Assurances) Ltd				
Managed Fund	291.3	306.6	–	43813
Equity Fund	404.6	425.8	–	43814
Property Fund	222.6	234.3	–	43815
International Fund	322.8	339.7	–	43816
Gilt Fund	270.8	285.0	–	43820
Money Fund	191.7	201.7	–	43819
United States Fund	146.6	154.4	–	43818
Pacific Basin	196.5	206.8	–	43817
Royal Life (Unit Lnkd. Pension Fds) Ltd				
Exempt Man Fd Acc.	335.1	352.7	–	43821
Exempt Equity Fd Acc.	630.0	663.1	–	43822
Exempt Prop Fd Acc.	235.6	247.9	–	43823
Exempt Intl Fd Acc.	497.9	524.1	–	43824
Exempt Gilt Fd Acc.	306.4	322.5	–	43825
Exempt Money Fd Acc.	250.9	264.1	–	43826

Royal Liver Assurance
Royal Liver Building, Liverpool, L3 1HT. 051 236 1451

	Bid Price	Offer Price	Yield Gross	City-line
UK Equity	65.7	69.2	–	43827
Global Equity	43.8	46.1	–	43828
High Yield	55.9	58.8	–	43829
Intl Equity	58.4	61.5	–	43830
Fixed Interest	59.9	63.0	–	43831
Money	66.9	70.4	–	43832
Managed	63.0	66.3	–	43833
Pension				
UK Equity	68.8	72.4	–	43834
Global Equity	40.4	42.5	–	43835
High Yield	56.7	59.7	–	43836

Skandia Life Assurance Co Ltd—Contd.

	Bid Price	Offer Price	Yield Gross	City-line
Unit Trust Life Managed Funds				
Abtrust Managed	92.1	96.9	–	41415
Baring Managed	104.5	109.9	–	47184
CU Managed	185.2	194.9	–	44161
Fidelity Managed	136.8	143.9	–	44031
Framlington Managed	178.3	187.6	–	44044
Gartmore Managed	188.8	198.7	–	44074
Henderson Managed	189.8	199.7	–	44109
James Capel Mngd.	109.9	115.6	–	45750
Kleinwort Benson Mngd	115.2	121.2	–	46434
Martin Currie Mngd	115.0	121.0	–	45755
MIM Britannia Managed	153.7	161.7	–	44141
Morgan Grenfell Mngd.	104.9	110.4	–	45787
Murray Johnstone Managed	99.6	104.8	–	47196
Perpetual Managed	147.3	155.0	–	44151
Schroder Managed	96.9	102.0	–	47120
TSB Managed	171.7	180.7	–	44173
Skandia Pension Managed Funds				
Balanced Managed	423.2	445.4	–	44174
Cautious Managed	114.0	120.0	–	44461
Deposit	376.4	396.2	–	40579
Equity	488.5	514.2	–	40639
International	394.8	415.5	–	41015
Intl Recovery	207.9	218.8	–	41020
Index Linked Gilt	106.4	111.9	–	47122
Gilt Plus	391.7	412.3	–	41011
Guaranteed Fd 1996	71.9	75.6	7.76	44737
North American	172.6	181.6	–	41382
North European	324.9	342.0	–	41485
Pacific	235.7	248.1	–	41914
Property	325.0	342.1	–	43490
Amer Index Monitor	128.4	135.1	–	47215
Euro Index Monitor	111.8	117.6	–	47216
Intl Index Monitor	94.0	98.9	–	47217
Japan Index Monitor	66.1	69.5	–	47218
Tiger Index Monitor	90.2	94.9	–	47917
UK Index Monitor	127.4	134.1	–	47219
Unit Trust Pension Managed Funds				
Abtrust Managed	92.8	97.6	–	41481
Baring Managed	109.4	115.1	–	47211
Fidelity Managed	141.7	149.1	–	44175
Framlington Managed	259.3	272.9	–	44176
Gartmore Managed	263.2	277.0	–	44177
Henderson Managed	237.7	250.2	–	44178
James Capel Mngd.	116.8	122.9	–	45806
Kleinwort Benson Mngd	119.3	125.5	–	46435
Martin Currie Mngd	120.4	126.7	–	45805

Target Life Assurance Co Ltd—Contd.

	Bid Price	Offer Price	Yield Gross	City-line
Worldwide Income	221.0	232.7	–	44326
Australian	24.1	25.4	–	44328
Japan & General	351.5	370.0	–	44329
Gold & General	60.9	64.2	–	44331
Financial	212.5	223.7	–	44332
Income	303.8	319.8	–	44333
UK Capital	196.7	207.1	–	44334
Preference	194.8	205.1	–	44336
International Bond	90.3	95.1	–	44337
European Spec Sits	186.2	196.1	–	44338
Sterling		10.8	–	44339
Residential Property	95.5	100.6	–	44340
Pension Funds				
Managed Pension	1581.6	1664.9	–	44342
Gilt Pens.	531.4	559.4	–	44343
Property Pens.	660.6	695.4	–	44344
Equity Pens.	594.3	625.6	–	44345

Finexco International Ltd
PO Box 193, St Peter Port, Guernsey 0481 713100

	Bid Price	Offer Price	Yield Gross	City-line
Intl $ Strategy Fd	$1.102	1.186	...	44987
Intl £ Strategy Fd	£1.305	1.404		44988
Intl DM Strategy	DM1.740	1.872		47980
$ Defensive Strategy Fd	$1.951	2.098		41662
$ Aggressive Strategy Fd	$1.961	2.109		41661

Underwritten by Providence Capitol Intl.

	Bid Price	Offer Price	Yield Gross	City-line
UK Property Bond	101.0			47373

Underwritten by Providence Capitol Life Assurance

Hansard International Ltd.
PO 192, Bank Hill, Nth Quay, Douglas IoM 0624 672111

	Bid Price	Offer Price	Yield Gross	City-line
£ Managed	£0.115	0.122	–	45212
£ Equity	£0.091	0.098	–	45213
£ Fixed	£0.146	0.157	–	45214
£ Deposit	£0.151	0.163	–	45215

Independent Financial Group PLC
Hornbeam Park, Harrogate, HG2 8QT 0423 873636

	Bid Price	Offer Price	Yield Gross	City-line
Life Managed Funds				
APM Managed (SAU)	177.3	186.6	–	44432
APM B.I. & Growth	114.4	120.5	–	46341
APM Bond Fund (Target)	104.1	109.6	–	44434
APM Unit Bd (S & P)	51.1	54.1	–	44435
Pensions Managed Funds				
APM Exclusive Pen (Brit)	157.4	165.7	–	44436
APM Mngd Pen (SAU)	665.4	700.4	–	44437
APM Mngd Pen (Target)	81.0	87.2	–	44438
APM Unit Pen (S & P)	66.8	70.7	–	44439

Johnson Fry Asset Managers Plc
20 Regent Street, London, SW1Y 4PZ 071-839 5688

	Bid Price	Offer Price	Yield Gross	City-line
JF M&G Managed (L)	176.5	185.4	–	44493
JF Target Pension (L)	94.4	102.1	–	44494
JF Secure Bond		200.4	–	44490

Lazard Fund Mngrs (Channel Islands) Ltd
PO Box 275, St. Peter Port, Guernsey, C.I. 0481 710461

Unit Name	Init Charge	Canc. Price	Bid Price	Offer Price	Yield Gr's	City-line
Lazard Select Investment Trust Ltd						
Global Active	5	£10.27	10.27	10.47	1.00	47271
UK Active	5	£11.73	11.73	12.01	6.00	47272
UK Liquid Assets	5	£10.00	10.00	10.05	10.5	47273
UK Index	5	£12.13	12.13	12.64	4.3	47274
US Index	5	£13.21	13.21	13.70	2.8	47275
Japan Index	5	£7.192	7.192	7.400	0.2	47276
Europe Index	5	£11.36	11.36	11.79	3.2	47277

Lion World Fixed Income Fund
Albert Hse, Sth Esplanade, St Peter Port 0481 713996

Lion World		99.557	99.557	99.708	–

Lloyds Intl Money Market Fund Ltd
Sarnia Hse, Le Truchot, St. Peter Port, Guy 0481 724983

Lloyds Bank Fund Managers (Guernsey) Ltd

Australian Dollar ♦	AS–	66.374		8.84	43405
[illegible]		73.767		7.99	44463

OFFSHORE INSURANCES

OFFSHORE AND OVERSEAS

BERMUDA (SIB RECOGNISED)

CANADA (SIB RECOGNISED)

GUERNSEY (SIB RECOGNISED)

GUERNSEY (REGULATED)

IRELAND (SIB RECOGNISED)

IRELAND (REGULATED)

MANAGEMENT SERVICES

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	Bid Price	Offer Price	Yield Gross	City-line
Baring International Fd Mngrs (Ireland) Ltd				
Australia	$16.70	17.54	1.05	44759
Japan Tech	$63.86	67.06	–	44762
Japan Fund	$26.72	28.06	0.17	44763
Japan New Garts Fd	$20.65	21.69	–	44764
Malay Sing	$50.30	52.82	0.31	44765
Nth American	$21.75	22.84	0.58	47418
Octopus Fund	$21.27	22.34	0.88	44766
Pacific Fd	$62.89	66.04	–	44767
International Bond	$17.49	18.37	6.89	44769
Europa Fund	$13.63	14.32	–	47191
British Screen Fd	£0.96	1.01	–	47190
Tristar Warrant	$10.42	10.95	–	47419
Hong Kong	$50.28	52.80	3.09	44761
Mngd Portfolio (Stlg)	£4.23	4.56	–	47319
Mngd Portfolio (Dlr)	$10.38	10.96	–	47318
Currency Fd-Sterling		£19.47	–	44755
Currency Fd-US Dollar		$15.34	–	44754
Curr Fd-Deutschemark		DM40.48	–	44756
Curr Fd-Managed $	$45.03	47.28	–	44758

Federated International Funds Plc
Federated Short-term US Gov't Securities Fund

	Bid Price	Offer Price	Yield Gross	City-line
Institutional Serv Series*		$1.00	5.47	40562
Investment Series*		$1.00	5.47	40563

* Annualised Yield

ISLE OF MAN (SIB RECOGNISED)

Allied Dunbar Intl Fund Mgrs (1600)F
Lord Street, Douglas, IoM 0624 661551

Unit Name	Init Charge	Canc. Price	Bid Price	Offer Price	Yield Gr's	City-line
ADI Managed(z)	5	0.5984	0.5866	0.6247	1.31	44675
ADI Mgd Currency(z)	5	0.3986	0.3906	0.4118	5.56	44676
ADI W'wide Eq(z)	5	0.6512	0.6512	0.6935	1.11	44677
ADI Nth Amer Gth(z)	5	0.748	0.748	0.7966	0.01	44678
ADI Far East (z)	5	1.137	1.137	1.21	1.1	44679
ADI Gilt & Income(z)	5	0.253	0.253	0.2668	8.55	44680
ADI UK Cap Gth (z)	5	0.2356	0.2356	0.2509	3.23	44681
ADI Europe Fd (z)	5	1.155	1.155	1.227	1.4	44682

For conversion Prices of Shares Phone 0624 662860

Asset Global Funds Ltd (1200)
Victory Hse, Prospect Hill, Douglas, IoM 0624 620097

Unit Name	Init Charge	Canc. Price	Bid Price	Offer Price	Yield Gr's	City-line
French Equity	5	[illegible]	139.08	149.01	–	44689
UK Gilt	5	[illegible]	10.201	10.75	–	44690
Intl Equity	5	[illegible]	13.633	14.60	–	44691
US Bond	5	$9.726	9.726	10.37	–	44692
Gilt Accum	5	£.9781	.9781	1.0270	0	47016
ECU Bond	5	£.9770	.9770	1.0258	–	47015

JERSEY (REGULATED)(**)

	Unit Name	Init Charge	Canc. Price	Bid Price	Offer Price	Yield Gr's	City-line
Midland Bank Fund Managers (Jersey) Ltd							
PO Box 26, St Helier, Jersey 0534 606000							
Intl Crcuh Portfolio	6	1.0039	1.0039	1.0646	1.65	41027
Gilt	3	0.9334	0.9334	0.9625	10.39	45446

For MIM see INVESCO MIM

Royal Trust Jsy Fd Mngt Ltd (1400)F
PO Box 428, St Helier, Jersey 0534 76077

Unit Name	Init Charge	Canc. Price	Bid Price	Offer Price	Yield Gr's	City-line
Govt Secs Fd	4	56.71	56.71	59.06	9.48	45734

TSB Trust Funds (CI)
PO Box 538, St Helier, Jersey 0534 73494
TSB Offshore Investment Fund Ltd

Unit Name	Init Charge	Canc. Price	Bid Price	Offer Price	Yield Gr's	City-line
Stg Deposit Class	3	101.37	101.37	104.41	10.10	45837
Gilt & Fixed Interest	3	105.18	105.18	109.06	7.89	43466
Blue Chip & Gilt Edged	5	51.35	51.35	54.65	3.66	43836
International Bond	5	108.47	108.47	114.90	5.57	43472
UK Equity	5	137.54	137.54	149.26	0.92	43572
International Equity	5	117.84	117.84	126.19	0.00	43569
Far Eastern	5	91.25	91.25	97.54	0.00	43481
European	5	87.59	87.59	92.73	0.00	43484
Pan American	5	145.39	145.39	154.88	0.00	43598
TSB Gilt Fund Ltd						
Quarterly Share	3	97.52	97.52	100.77	10.22	45833
Monthly Share	3	97.16	97.16	100.38	10.28	45834

Barclays Intl Funds

	Bid Price	Offer Price	Yield Gross	City-line
Currency Funds				
Sterling		£21.13	9.6	44718
US Dollar		$31.31	4.3	44719
Deutschemark		DM54.83	7.9	44720
Yen		Y4,025	6.0	44721
Managed Multicurrency	£13.14	13.61	–	44722
Managed Multicurrency	$25.13	26.02	–	44723
Bond Funds				
Sterling Bond	£0.416	0.432	10.6	44724
US Government Income	$98.95	102.47	6.6	44725
Asian Selection Funds				
Hong Kong	$12.814	13.488	1.3	44544
Indonesia	$7.745	8.153	3.0	44686
Korea	$11.580	12.189	4.0	44687
Malaysia	$9.296	9.785	2.3	44696
Philippines	$10.493	11.045	4.0	44699
Singapore	$10.586	11.143	4.0	44700
Thailand	$11.546	12.154	4.5	44717
South East Asia	$10.863	11.435	3.5	44716
US Dollar Liquidity	$9.514	9.990	2.2	44675

LUXEMBOURG (SIB RECOGNISED)

ISLE OF MAN (REGULATED)(**)

JERSEY (SIB RECOGNISED)

SWITZERLAND (SIB RECOGNISED)

OTHER OFFSHORE FUNDS

LUXEMBOURG (REGULATED)(**)

CURRENCIES, MONEY AND CAPITAL MARKETS

MONEY MARKETS

ERM speculation undermines peseta

A CURIOUS development took place last week within the Exchange Rate Mechanism. The peseta, which is the system's strongest currency and widely considered to be overvalued, was nonetheless seen to be supported by the Bank of Spain.

UK clearing bank base lending rate 10.5 per cent from September 4, 1991

The reason for Madrid's concern is not hard to fathom. The Spanish monetary authorities are preparing the ground for the peseta to move to the narrower 2.25 per cent fluctuation band. At present, the peseta and sterling can move by 6 per cent against other ERM currencies.

Binding the peseta more tightly to the rest of Europe could bring political advantages to the Spanish government. Being seen to be a good European may strengthen its case for a new EC compensation fund for southern European countries.

But a switch to narrow bands also carries risks: namely that by coaxing the peseta into line with other currencies by way of lower interest rates, the Bank of Spain risks a stampede in the currency markets.

The threat of funds moving *out of Spain is a real danger.* So far, hot money has been attracted into Spain by high interest rates. This inflow of speculative capital has funded Spain's large current account deficit.

In the run up to the Maastricht summit in December, when the move to the narrow bands could be executed, the Bank must try to manage a further depreciation in the peseta without causing a damaging run on its currency. The markets will be watching with interest over the next two months to see how the wind is taken out of the peseta's sails.

£ IN NEW YORK

Oct.4	Close	Previous Close
£ Spot	1.7365-1.7375	1.7515-1.7525
1 month	0.79-0.77pm	0.78-0.77pm
3 months	2.10-2.07pm	2.07-2.05pm
12 months	7.12-7.05pm	7.10-7.00pm

Forward premiums and discounts apply to the US dollar

STERLING INDEX

	Oct.4	Previous
8.30 am	91.0	91.1
9.00 am	91.0	91.1
10.00 am	91.0	91.1
11.00 am	91.0	91.1
Noon	91.0	91.1
1.00 pm	91.0	91.1
2.00 pm	91.0	91.1
3.00 pm	90.9	91.1
4.00 pm	90.9	91.1

OTHER CURRENCIES

Oct 4	£	$
Argentina	17354.5 - 17382.1	9900.00 - 9910.00
Australia	2.1900 - 2.1920	1.2590 - 1.2600
Brazil	944.200 - 945.810	541.400 - 541.700
Finland	7.1015 - 7.1230	4.0770 - 4.0880
Greece	321.400 - 326.550	183.830 - 186.770
Hong Kong	13.4635 - 13.4765	7.7400 - 7.7420
Iran	115.80*	68.50*
Korea(Sth)	1293.40 - 1314.25	740.00 - 748.80
Kuwait	0.50000 - 0.50100	0.28885 - 0.28900
Luxembourg	60.00 - 60.10	34.50 - 34.60
Malaysia	4.7530 - 4.7610	2.7345 - 2.7365
Mexico	5355.15 - 5342.75	3058.00 - 3060.00
N.Zealand	3.0755 - 3.0790	1.7650 - 1.7670
Saudi Ar	6.5215 - 6.5980	3.7500 - 3.7510
Singapore	2.9320 - 2.9390	1.6880 - 1.6890
S.Af (Cm)	4.8705 - 4.8910	2.8090 - 2.8120
S.Af (Fn)	5.3615 - 5.4455	3.0770 - 3.1250
Taiwan	46.30 - 46.40	26.45 - 26.50
U.A.E.	6.3845 - 6.4615	3.6715 - 3.6735

* Selling rate.

CURRENCY MOVEMENTS

Oct 4	Bank of England Index	Morgan** Guaranty Changes %
Sterling	90.9	-20.9
U.S Dollar	64.2	-15.0
Canadian Dollar	106.1	+3.7
Austrian Schilling	109.1	+11.6
Belgian Franc	110.7	-2.3
Danish Krone	108.5	+3.2
D-Mark	117.3	+24.3
Swiss Franc	109.2	+18.2
Dutch Guilder	113.5	+15.8
French Franc	102.1	-13.4
Lira	98.6	-19.8
Yen	142.6	+74.8

Morgan Guaranty changes: average 1980-1982=100. Bank of England Index (Base Average 1985=100). **Rates are for Oct.3

CURRENCY RATES

Oct 4	Bank § rate %	Special * Drawing Rights	European † Currency Unit
Sterling	-	0.781636	0.702877
U.S Dollar	5.50	1.37099	1.22849
Canadian $	8.78	1.55114	1.39077
Austrian Sch	7.50	16.0228	14.4065
Belgian Franc	8.00	46.9324	42.1894
Danish Krone	9.50	8.79010	7.89734
D-Mark	7.50	N/A	2.04728
Dutch Guilder	8.00	2.56677	2.30710
French Franc	10¼	7.76186	6.97781
Italian Lira	11½	1703.85	1531.31
Japanese Yen	5.50	179.874	159.335
Norway Krone	8	8.91185	8.00913
Spanish Peseta	-	144.909	129.635
Swedish Krona	10.00	8.30272	7.46307
Swiss Franc	7.00	1.98999	1.78929
Greek Drach	19	N/A	228.327
Irish Punt	-	N/A	0.765747

§ Bank rate refers to central bank discount rates. These are not quoted by the UK, Spain and Ireland.
† European Commission Calculations.
* All SDR rates are for Oct.3

POUND SPOT - FORWARD AGAINST THE POUND

Oct 4	Day's spread	Close	One month	% p.a.	Three months	% p.a.
US	1.7380 - 1.7540	1.7385 - 1.7395	0.79-0.77cpm	5.38	2.10-2.07pm	4.8
Canada	1.9680 - 1.9840	1.9715 - 1.9725	0.38-0.29cpm	2.04	1.09-0.96pm	2.08
Netherlands	3.2800 - 3.2900	3.2800 - 3.2900	½-¼cpm	1.37	1-¾pm	1.07
Belgium	59.85 - 60.15	60.00 - 60.10	10-5cpm	1.50	21-14pm	1.17
Denmark	11.2170 - 11.2570	11.2375 - 11.2475	1⅛-⅝orepm	1.07	2½-1½pm	0.71
Ireland	1.0880 - 1.0965	1.0900 - 1.0910	0.05-parcpm	0.28	0.13-0.03pm	0.29
Germany	2.9115 - 2.9200	2.9150 - 2.9200	⅜-¼cpm	1.29	1-¾pm	1.20
Portugal	249.50 - 251.30	250.30 - 251.30	55-92cdis	-3.52	204-277dis	-3.84
Spain	183.95 - 184.95	184.35 - 184.65	24-32cdis	-1.82	81-95dis	-1.91
Italy	2174.95 - 2181.70	2178.50 - 2179.50	par-2liredis	-0.55	4-6dis	-0.92
Norway	11.3685 - 11.4175	11.3900 - 11.4000	¼-½oredis	-0.39	¼-1dis	-0.2
France	9.9175 - 9.9470	9.9300 - 9.9400	1⅛-⅛cpm	1.13	2½-1½pm	0.78
Sweden	10.5955 - 10.6420	10.6150 - 10.6250	¼-⅛orepm	0.21	⅝-1¼dis	-0.31
Japan	225.75 - 227.85	225.75 - 226.75	⅞-⅝ypm	3.65	2¼-2pm	3.76
Austria	20.47 - 20.53	20.49 - 20.52	2⅝-1½gropm	1.21	5¼-3¼pm	0.82
Switzerland	2.5430 - 2.5575	2.5475 - 2.5575	⅝-⅜cpm	2.35	1⅝-1¼pm	2.06
Ecu	1.4205 - 1.4260	1.4250 - 1.4260	0.08-0.03cpm	0.46	0.07-0.01pm	0.11

Commercial rates taken towards the end of London trading. Six-month forward dollar 3.90-3.85cpm. 12 Month 7.15-7.05pm.

DOLLAR SPOT - FORWARD AGAINST THE DOLLAR

Oct 4	Day's spread	Close	One month	% p.a.	Three months	% p.a.
UK†	1.7380 - 1.7540	1.7385 - 1.7395	0.79-0.77cpm	5.38	2.10-2.07pm	4.80
Ireland†	1.5930 - 1.6095	1.5960 - 1.5970	0.66-0.61cpm	4.77	1.88-1.78pm	4.59
Canada	1.1310 - 1.1325	1.1315 - 1.1325	0.30-0.33cdis	-3.34	0.75-0.80dis	-2.74
Netherlands	1.8700 - 1.8905	1.8880 - 1.8890	0.62-0.65cdis	-4.03	1.82-1.87dis	-3.91
Belgium	34.20 - 34.60	34.50 - 34.60	10.50-12.30cdis	-3.98	31.00-36.00dis	-3.90
Denmark	6.4045 - 6.4675	6.4625 - 6.4675	2.25-2.55oredis	-4.45	6.50-7.10dis	-4.21
Germany	1.6590 - 1.6785	1.6770 - 1.6780	0.55-0.56pfdis	-3.97	1.64-1.66dis	-3.93
Portugal	144.00 - 144.15	144.00 - 144.10	98-105cdis	-8.46	295-310dis	-8.40
Spain	105.15 - 106.20	106.10 - 106.20	63-68cdis	-7.40	178-188dis	-6.90
Italy	1241.25 - 1253.50	1252.75 - 1253.25	5.90-6.40liredis	-5.89	17.80-18.80dis	-5.84
Norway	6.4950 - 6.5550	6.5500 - 6.5650	2.85-3.15oredis	-5.49	8.00-8.50dis	-5.04
France	5.6565 - 5.7180	5.7100 - 5.7150	1.98-2.03cdis	-4.21	5.76-5.81dis	-4.05
Sweden	6.0455 - 6.1210	6.1050 - 6.1100	2.55-2.80oredis	-5.26	7.60-8.05dis	-5.12
Japan	129.45 - 130.25	129.90 - 130.00	0.16-0.17ydis	-1.52	0.34-0.35dis	-1.06
Austria	11.6820 - 11.7850	11.7800 - 11.7850	4.00-4.40grodis	-4.28	11.30-12.50dis	-4.04
Switzerland	1.4500 - 1.4690	1.4665 - 1.4675	0.333-0.36cdis	-2.83	0.98-1.04dis	-2.75
Ecu	1.2200 - 1.2330	1.2205 - 1.2215	0.51-0.48cpm	4.86	1.46-1.39pm	4.67

Commercial rates taken towards the end of London trading. † UK, Ireland and ECU are quoted in US currency. Forward premiums and discounts apply to the US dollar and not to the individual currency.

EXCHANGE CROSS RATES

Oct.4	£	$	DM	Yen	F Fr.	S Fr.	H Fl.	Lira	C$	B Fr.	ECU
£	1	1.739	2.918	226.3	9.935	2.553	3.285	2179.	1.972	60.05	1.426
$	0.575	1	1.678	130.1	5.713	1.468	1.889	1253	1.134	34.53	0.820
DM	0.343	0.596	1	77.55	3.405	0.875	1.126	746.7	0.676	20.58	0.489
YEN	4.419	7.684	12.89	1000.	43.90	11.28	14.52	9629	8.714	265.4	6.301
F Fr.	1.007	1.750	2.937	227.8	10.	2.570	3.306	2193	1.985	60.44	1.435
S Fr.	0.392	0.681	1.143	88.64	3.892	1	1.287	853.5	0.772	23.52	0.559
H Fl.	0.304	0.529	0.888	68.89	3.024	0.777	1	663.3	0.600	18.28	0.434
Lira	0.459	0.798	1.339	103.9	4.559	1.172	1.508	1000.	0.905	27.56	0.654
C$	0.507	0.882	1.480	114.8	5.038	1.295	1.666	1105	1	30.45	0.723
B Fr.	1.665	2.896	4.859	376.9	16.54	4.251	5.470	3629	3.284	100.	2.375
ECU	0.701	1.219	2.046	158.7	6.967	1.790	2.304	1528	1.383	42.11	1

Yen per 1,000: French Fr. per 10: Lira per 1,000: Belgian Fr. per 100.

EURO-CURRENCY INTEREST RATES

Oct 4	Short term	7 Days notice	One Month	Three Months	Six Months	One Year
Sterling	10½ - 10¼	10½ - 10¼	[illegible]	[illegible]	[illegible]	10½ - 10¼
[illegible]						

FT LONDON INTERBANK FIXING

[illegible]

MONEY RATES

[illegible]

LONDON MONEY RATES

[illegible]

CHICAGO

[illegible]

LONDON RECENT ISSUES

EQUITIES

[illegible]

FIXED INTEREST STOCKS

[illegible]

RIGHTS OFFERS

[illegible]

BANK OF ENGLAND TREASURY BILL TENDER

[illegible]

WEEKLY CHANGE IN WORLD INTEREST RATES

[illegible]

BRUSSELS			MILAN		
One month	9⅛	+⅛	One month	11½	Unch'd
Three month	9⅜	+⅛	Three month	11⅞	Unch'd
AMSTERDAM			DUBLIN		
One month	9.165	+0.035	One month	10⅛	Unch'd
Three month	9.265	+0.040	Three month	10⅞	+⅛

MONEY MARKET FUNDS

Money Market Trust Funds

[illegible]

Money Market Bank Accounts

[illegible]

Clydesdale Bank PLC
30 St Vincent Place, Glasgow G1 2HL 041 248 7070

£2,000-£24,999	8.25	6.19	8.51	-
£25,000-£99,999	9.00	6.75	9.31	-
£100,000+	9.50	7.13	9.84	-

Co-operative Bank
PO Box 300, Skelmersdale, Lancs 0800 616162

TESSA				
TESSA	11.50	-	-	-
Investment 90 - 90 Day Notice Savings				
£50,000+	10.75	8.10	11.0	-
£25,000-£49,999	10.50	7.90	10.8	-
£10,000-£24,999	9.50	7.10	9.7	-

Wimbledon & South West Finance PLC
114 Newgate St, London EC1 7AE 071-606 9485

High Int Cheque Acc	10.60	7.95	11.03	-

NOTES– Gross: Contractual rate of interest payable, not taking account of the deduction of basic rate income tax. Net: Rate of interest payable after allowing for deduction of basic rate income tax. Gross CAR: Gross rate annualised to take account of compounding of interest paid other than once a year. 'Compounded Annual Rate'. Int Cr: Frequency at which interest is credited to the account.

FINANCIAL TIMES STOCK INDICES

	Oct 4	Oct 3	Oct 2	Oct 1	Sep 30	Sep 27	1991 High	1991 Low	Since Compilation High	Since Compilation Low
Government Secs.	87.26	87.44	87.48	87.56	87.44	87.28	87.94	82.17	127.4	49.18
Fixed Interest	97.07	97.11	97.17	96.93	96.93	96.84	97.17	90.59	105.4	50.53
Ordinary	2018.7	2019.2	2037.9	2035.9	2021.6	2018.9	2108.3	1606.3	2108.3	49.4
Gold Mines	161.2	159.9	157.2	158.9	155.6	158.1	222.8	127.0	734.7	43.5
FT Act All-Share	1266.15	1267.41	1275.36	1275.62	1265.96	1257.47	1284.07	987.46	1284.07	61.92
FT-SE 100	2624.6	2625.6	2644.2	2645.6	2621.7	2599.0	2679.6	2054.8	2679.6	986.9
FT-SE Eurotrack 100	1098.21	1102.18‡	1104.34	1105.95	1100.47	1104.16	1165.54	900.45	1165.54	900.45
FT-SE Eurotrack 200	1170.14	1172.61‡	1178.20	1178.95	1171.82	1169.39	1198.60	938.62	1198.60	938.62

‡ Partial

LONDON SHARE SERVICE

BRITISH FUNDS

"Shorts" (Lives up to Five Years)

[illegible]

Five to Fifteen Years

[illegible]

BRITISH FUNDS—Contd

Over Fifteen Years

[illegible]

Undated

[illegible]

Index-Linked

[illegible]

(b) Figures in parentheses show RPI base for indexing, (ie 8 months prior to issue) and have been adjusted to reflect rebasing of RPI to 100 in January 1987. Conversion factor 3.945. RPI for January 1991: 130.2 and for August 1991: 134.1.

INT. BANK AND O'SEAS

[illegible]

CORPORATION LOANS

[illegible]

COMMONWEALTH & AFRICAN LOANS

[illegible]

LOANS

Building Societies

[illegible]

Public Board and Ind.

25 Met. Wtr. 3pc 'B' ... 53 ... 1.8 1Mar 1Sep 3361

FOREIGN BONDS & RAILS

Amount £m	Stock	Price £	Week % change	Yld	Last xd	Interest Paid	City-line
7	Greek 7pc Ass.	58	......	7.00	1.11	1May 1Nov	2763
4	Do. 6pc 28 Stb. Ass.	58	......	6.00	1.2	1Feb 1Aug	2762
-	Do 4pc Mixed Ass.	58	......	4.00	3.4	1Apr 1Oct	2761
1	Hung. '24 Ass.	59	......	3.57	3.5	1May	2935
40	Hydro Quebec 15pc 2011	132¾	......	10.94	27.10	31May 30Nov	-

Continued on next page

FT-ACTUARIES WORLD INDICES

Jointly compiled by The Financial Times Limited, Goldman, Sachs & Co., and County NatWest/Wood Mackenzie in conjunction with the Institute of Actuaries and the Faculty of Actuaries

[illegible]

Base values: Dec 31, 1986 = 100; Finland: Dec 31, 1987 = 115.037 (US $ Index), 90.791 (Pound Sterling) and 94.94 (Local); Nordic: Dec 30, 1988 = 139.65 (US $ Index), 114.45 (Pound Sterling) and 123.22 (Local).

BASE LENDING RATES

	%		%		%
Adam & Company	10.5	Credit Lyonnais	10.5	Midland Bank	10.5
Allied Trust Bank	10.5	Cyprus Popular Bk	10.5	Mount Banking	10.5
AIB Bank	10.5	Dunbar Bank PLC	10.5	NatWestminster	10.5
● Henry Ansbacher	10.5	Duncan Lawrie	10.5	Northern Bank Ltd	10.5
B & C Merchant Bank	10.5	Equatorial Bank plc	10.5	Nykredit Mortgage Bank	11
Bank of Baroda	10.5	Exeter Bank Limited	11	Provincial Bank PLC	14
Banco Bilbao Vizcaya	10.5	Financial & Gen. Bank	11	Roxburghe Bank Ltd.	11.5
Bank of Cyprus	10.5	First National Bank Plc.	14	Royal Bk of Scotland	10.5
Bank of Ireland	10.5	● Robert Fleming & Co.	10.5	● Smith & Williamson Secs.	10.5
Bank of India	10.5	Robert Fraser & Ptnrs.	11	Standard Chartered	10.5
Bank of Scotland	10.5	Girobank	10.5	TSB	10.5
Banque Belge Ltd	10.5	● Guinness Mahon	10.5	Unibank plc	10.5
Barclays Bank	10.5	● Hambros Bank	10.5	● United Bk of Kuwait	10.5
Benchmark Bank	11	Hampshire Trust Plc	13.5	Unity Trust Bank Plc	10.5
Brit Bk of Mid East	10.5	Heritable & Gen Inv Bnk.	10.5	Western Trust	10.5
● Brown Shipley	10.5	● Hill Samuel	10.5	Westpac Bank Corp.	10.5
CL Bank Nederland	10.5	C. Hoare & Co.	10.5	Whiteaway Laidlaw	10.5
Citibank NA	10.5	Hongkong & Shanghai	10.5	Yorkshire Bank	10.5
City Merchants Bank	10.5	● Leopold Joseph & Sons	10.5		
Clydesdale Bank	10.5	Lloyds Bank	10.5		
Co-operative Bank	10.5	Meghraj Bank Ltd	10.5		
Coutts & Co	10.5	McDonnell Douglas Bnk	10.5		

● Members of British Merchant Banking & Securities Houses Association.

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AMERICANS

[illegible]

CANADIANS

[illegible]

For Varity see Americans

BANKS, HP & LEASING

[illegible]

Hire Purchase, Leasing, etc.

[illegible]

BEERS, WINES & SPIRITS

[illegible]

BUILDING, TIMBER, ROADS

[illegible]

BUILDING, TIMBER, ROADS — Contd

[illegible]

CHEMICALS, PLASTICS

[illegible]

DRAPERY AND STORES

[illegible]

DRAPERY AND STORES — Contd

[illegible]

ELECTRICALS

[illegible]

ELECTRICITY

[illegible]

ENGINEERING

[illegible]

FOOD, GROCERIES, ETC

[illegible]

HOTELS AND CATERERS

[illegible]

INDUSTRIALS (Miscel.)

[illegible]

INDUSTRIALS (Miscel.) — Contd

[illegible]

INDUSTRIALS (Miscel.) — Contd

[illegible]

INSURANCES

[illegible]

LEISURE

[illegible]

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LEISURE – Contd

MOTORS, AIRCRAFT TRADES

Commercial Vehicles

Components

Garages and Distributors

NEWSPAPERS, PUBLISHERS

PAPER, PRINTING, ADVERTISING

PROPERTY

PROPERTY – Contd

SHOES AND LEATHER

SOUTH AFRICANS

TEXTILES

TOBACCOS

TRANSPORT

INVESTMENT TRUSTS

INVESTMENT TRUSTS – Contd

Net asset values supplied by County NatWest Wood Mackenzie as a guide only.

FINANCE, LAND, ETC

FINANCE, LAND, ETC – Contd

WATER

OIL AND GAS

Market Cap. £m	Stock	Price	Week % change	Y'ld Gr's	Last xd	Dividends Paid	City-line
42.2	Do. 9½pc CnvRPf £1	105½	0.5	12.2	3.6	Jul Jan	3188
172.4	Mid & Scot. Res.	83	-5.7	–	–	–	3032
15,785	Mobil Corp. $2	£39¾	-0.3	4.8	1.8	MrJeSeDe	–
253.1	Monument Oil 5p	38	-5.0	–	–	–	3406
15.9	New London 5p	15½	....	–	31.12	–	3480
–	NZ Oil & Gas NZ$0.50	14½	-3.3	–	–	–	–
3,103.6	Norsk Hydro Kr20	£15¼	-5.0	2.4	29.4	May	3514
15.2	North Sea Assets 5p	30	....	–	11.85	–	3528
3,954.3	Occidental Pet. 20c	£13¼	....	4.5	5.6	JaApJyOc	1794
–	Ohio Res.	16¼	....	–	–	–	–
6.73	Oliver Res.	7½	7.1	–	–	–	1469
–	Pan Pacific Pet.	4½	....	–	–	–	4850
4,871.3	Petrofina SA	£188¼	0.5	5.3	22.5	May	–
37.2	Pict. Pet. 5p	101	....	–	–	–	3669
25.5	Pittencrieff 10p	133	5.6	4.5	16.9	Oct May	3360
217.7	Premier Cons. 5p	42	10.5	–	–	–	3711
55.7	Presidio Oil A	228	....	2.7	7.8	FeMyAuNv	4998
408.1	Ranger Oil	420	-0.7	1.1	25.3	Apr	3770
19.1	Richmond Oil & Gas 10p	21	-8.7	–	26.9	–	4976
24,592.4	Royal Dutch F15	£45⅞	-6.4	5.1	16.9	May Sep	3872
679.1	Santos A$0.25c	150	1.4	5.8	10.4	Jul May	3916
–	Sceptre Res.	131	0.8	–	–	–	–
7,717.9	Schlumberger $0.01	£32¾	-0.8	2.2	2.8	JaApJyOc	–
16,721.7	Shell Trans. Reg.	504½	0.3	5.3	16.9	Nov May	4003
6.50	Do. 7pcPf. £1	65	....	10.1	15.7	Feb Aug	4005
79.6	Sovereign Oil	143	....	–	–	–	4067
5.92	Teredo Petroleum 50pc	19	....	–	–	–	3289
1,598.7	Texaco 8pc Cnv.	£127½	....	6.3	15.4	Jun Oct	4201
3,784.2	Total B	587	-2.1	4.1	16.6	Jun	–
1.27	Trident Pet.	4½	....	–	–	–	–
79.2	Triton Europe 5p	96	1.1	1.5	28.1	Mar	4313
16.0	Tullow Oil 10p	10½	-4.5	–	30.5	–	4886
15.1	Tuskar Res Ir 5p	5¼	-4.2	–	–	–	1479
6.11	Utd. Energy 1p	2	14.3	–	13.8	–	4805
0.64	Do. Warrants	1½	50.0	–	–	–	4808
942.3	Ultramar	256	8.1	5.5	2.9	May Oct	4340
3.69	Victoria Pet.	5½	....	–	–	–	2465
1,213.3	Woodside A50c	182	5.8	1.1	–	May	4535
0.74	XCL Sunrise	3¼	8.3	–	–	–	3647

PLANTATIONS

Market Cap. £m	Stock	Price	Week % change	Y'ld Gr's	Last xd	Dividends Paid	City-line
	Rubbers, Palm Oil						
9.54	Anglo-East Plants.	43	4.9	–	11.6	Jul Nov	1618
15.0	Bertam 10p	74	....	3.6	1.7	Aug	1816
239.8	Cons. Plants M$0.5	34	-5.6	5.1	16.9	Apr Nov	4081
241.6	Golden Hope Pls. M$1	31xd	-1.6	4.2	30.9	May Nov	2839
172.2	Highlands M50c	57xd	2.7	7.6	30.9	Jun Nov	2893
262.7	Kuala Kepong M$1	62	-3.1	5.2	2.9	Apr Oct	3109
3.85	Lendu Hldgs. 5p	38	....	1.3	20.5	Dec Jul	3154
14.6	Rowe Evans Inv. 10p	41	....	3.3	17.6	Aug	3868
	Teas						
6.69	Moran 10p	150	....	0.9	10.12	Jan Jul	3411
25.2	Williamson £1	1100	....	3.0	2.9	May Oct	4512

MINES

Central Rand

Market Cap. £m	Stock	Price	Week % change	Y'ld Gr's	Last xd	Dividends Paid	City-line
7.44	Durban Deep R1	320	8.1	–	12'86	–	2389

Eastern Rand

Far West Rand

O.F.S.

Market Cap. £m	Stock	Price	Week % change	Y'ld Gr's	Last xd	Dividends Paid	City-line
252.4	Beatrix Mines	297	-2.3	5.0	16.9	Apr Oct	1782
534.5	F.S. Cons. Gold 50c	454	8.4	6.6	20.5	Jun Dec	2629
6.67	Free State Dev. 10c	30	3.4	–	–	–	2630
86.0	Harmony 50c	320	3.9	‡	3.4	Feb Aug	2833
88.2	Joel (H.J.) Gold 1c	90	....	–	–	–	3044
9.49	Loraine R1	98	12.6	–	14.11	–	3220
39.7	St. Helena R1	412	3.3	14.8	29.7	Mar Sep	4087
51.8	Unisel	185	-1.1	‡	29.4	Jan Nov	4356

Diamond and Platinum

Market Cap. £m	Stock	Price	Week % change	Y'ld Gr's	Last xd	Dividends Paid	City-line
1,950.0	Anglo Am. Inv. 5c	£19½	-1.3	4.2	29.4	Dec Jun	–
5,711.7	De Beers Linked Units	£15¾	0.6	4.0	2.10	Nov May	2322
2.60	Do. 40pc Pf. R5	325	....	13.2	1.7	Feb Aug	–
532.1	Impala Plat. 20c	870	-8.4	6.8	16.9	Mar Oct	2970
118.8	Lydenburg 12½c	750	-3.2	6.0	25.2	Mar Oct	–
184.3	Northam Platinum	320	2.9	–	–	–	3523
1,332.2	Rus. Plat. 10c	1063xd	-4.6	7.0	30.9	Mar Oct	3890

Central African

Market Cap. £m	Stock	Price	Week % change	Y'ld Gr's	Last xd	Dividends Paid	City-line
7.59	Falcon Z50c	38	-7.3	4.5	15.7	Aug	2538
5.83	Wankie Col. Z$1	23	....	7.5	20.5	Nov	4424
2.92	Willoughby's Cons. 50p	80	....	3.5	1.7	Apr Aug	1372
2.64	Do. Pfd. 1p	40	....	7.0	1.7	Aug Apr	5251
18.4	Zam. Cpr. SBD0.24	15	....	–	9'80	–	4568

Finance

Market Cap. £m	Stock	Price	Week % change	Y'ld Gr's	Last xd	Dividends Paid	City-line
593.6	Ang. Am. Coal 50c	£23½	....	3.9	3.6	Dec Jun	1607
4,899.5	Anglo Amer. 10c	£21⅛	-4.5	3.3	1.7	Jan Aug	1608
950.8	Ang. Am. Gold R1	£39¾	2.9	4.3	29.4	Jun Nov	1609
11.7	Anglo Pacific Res.	15	....	–	17.4	–	3529
214.0	Anglovaal 5c	£12	-4.0	1.6	17.6	Jan Jul	–
167.1	Antofagasta Hldgs.	558	....	3.6	15.4	Dec Jun	1626
1.00	Do. 5pc Cum Prf £1	50	....	10.5	27.11	Dec Jul	–
2.14	Burlington 12½p	14½	....	5.0	15.4	Jul	2716
22.5	Cluff Res.	48	2.1	2.9	11.3	Jul	2167
475.5	Gencor 10c	118	....	6.2	16.9	Feb Oct	–
2,717.8	Gencor 4c	231	....	3.7	20.5	Dec May	4956
	For Gold & Base see Burlington						
1,261.4	Gold Fields S.A. 5c	1312	3.5	3.3	2.9	Mar Sep	2717
1,292.1	Jo'burg Cons. 10c	875xd	1.7	3.2	30.9	Mar Oct	–
369.9	Middle Wit 1c	115	-4.2	1.1	17.6	Aug Feb	–
1,331.8	Minorco $1.40	782xd	4.0	3.9	30.9	Nov May	1237
13.6	Monarch Res. 10p	98	-2.0	–	–	–	3401
56.7	New Wits 25c	185	2.8	6.0	2.9	Feb Sep	–
233.5	OFS Invs 1c	1037	5.7	7.5	20.5	Jun Dec	3564
192.0	Rand Mines R1	£12¾	4.0	‡	10.6	Jul Jan	3765
29.5	Rand Min. Props. R1	238	....	12.6	20.5	Jan Jun	3766
19.7	Vogels 2½c	107	....	12.0	2.9	Sep Feb	4407
5.38	Waverley Min Fin 5p	43	....	–	28.11	–	4743
94.7	Welkom Gold Hldgs 50c	268	7.6	7.4	20.5	Jun Dec	4454

MINES – Contd

Australians

Market Cap. £m	Stock	Price	Week % change	Y'ld Gr's	Last xd	Dividends Paid	City-line
101.0	ACM 50c	52	2.0	2.4	–	Nov	1696
63.6	ACM Gold	18½	....	13.9	–	Oct	1371
1.02	Arboyne 50c	3	....	–	–	–	–
–	Aztec Expln.	32	-3.0	1.5	–	–	4684
132.4	Bougainville 1 Kina	33	3.1	–	28.9	–	1882
1,661.0	CRA $2	628	1.8	‡	31.10	May Nov	2265
–	Central Pacific	63	-19.2	–	–	–	2093

Market Cap. £m	Stock	Price	Week % change	Y'ld Gr's	Last xd	Dividends Paid	City-line
5,614.7	RTZ 10p	566	0.2	4.6	16.9	Dec Jul	3880
–	Thorco Res. Inc.	10¼	....	–	–	–	–
1.61	Vizcaya Hldgs 5p	3	....	–	–	–	4193
41.7	Warn & Pac Res	76	-17.4	–	–	–	–
11.2	Young Group 10p	120	....	5.8	2.9	May Oct	5080

Tins

Miscellaneous

For Animex see OIL & GAS

NOTES

Stock Exchange dealing classifications are indicated to the right of security names: α Alpha refers to shares traded through SEAQ by at least two marketmakers and with a normal market size of 2,000 or more, based on experience of how many of its shares are traded in the typical deal. β Beta refers to all other shares. γ Gamma refers to other traded instruments.

Unless otherwise indicated, prices are in pence and denominations are 25p. Yields are based on middle prices, are gross, adjusted to ACT of 25 per cent and allow for value of declared distribution and rights.

Estimated Net Asset Values (NAVs) are shown for Investment Trusts, in pence per share, along with the percentage discounts (Dis) or premiums (Pm -) to the current pre-closing share price. The NAV basis assumes prior charges at par value, convertibles converted and warrants exercised if dilution occurs.

- ● "Tap Stock"
- † Interim since reduced, passed or deferred
- ‡‡ Tax-free to non-residents on application
- ♥ Not officially UK listed; dealings permitted under rule 535(4)(a)
- ♣ USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- ‡‡ Not officially listed.
- # Price at time of suspension
- ‡ Not comparable
- ¶ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ★ Cover does not allow for shares which may also rank for dividend at a future date.
- ∥ No par value

B.Fr. Belgian Francs. Fr. French Francs §§ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock. c Cents. e Redemption yield. f Flat yield. k Kenya. C Canadian. E Minimum tender price.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xt ex capital distribution.

REGIONAL & IRISH STOCKS

The following is a selection of Regional and Irish stocks, the latter being quoted in Irish currency.

Craig & Rose £1 β	640	....
Finlay Pkg. 5p β	26	23.8
Holt (Jos) 25p β	1985xd	0.1
Helton Hldgs γ	38	....

IRISH

Cap. 8½% Ln. 2010	£94	0.5
9pc Cap Ln. 1996	£98¼	-0.3
Fin. 13% 97/02	£114¼	0.2
Arnotts	200	....
IRG	125	-3.8
United Drug	175	....

TRADITIONAL OPTIONS

3-month call rates

Industrials	p
Allied-Lyons	50
Amstrad	6
Astec (BSR)	5
BAT	53
BOC Grp.	48
BTR	33
Barclays	34
Blue Circle	20
Boots	33
Bowaters	55
Brit Aerospace	35
British Steel	10
Brit. Telecom	35
Cadburys	35
Charter Cons	42
Comm Union	40
Courtaulds	38
Eurotunnel	50
FKI	5
FNFC	10
Forte	21
Gen Accident	43
GEC	16
Glaxo	110
Grand Met	67
Guardian	14
GKN	28
Hanson	17
Hawker Sidd	55
ICI	95
Ladbroke	21
Legal & Gen	33
Lex Service	16
Lloyds Bank	30
Lucas Inds	12
Marks & Spencer	21
Midland Bk	20
Nat West Bk	26
P & O Dfd	41
Racal Elect	6
RHM	23
Rank Org Ord	55
Ratners	12
Reed Intnl	35
Sears	8½
SmKl. Beecham A	53
TI	39
TSB	11
Tesco	21
Thorn EMI	65
T&N	14
Unilever	60
Vickers	16
Wellcome	60

Property	
Brit Land	27
Control Secs	2
Land Securities	42
MEPC	42
Mountleigh	4

Oils	
Aviva Petlm	3
Brit Petroleum	26
Burmah Castrol	47
Conroy Petlm	8
Gaelic Res	1
Premier	4
Shell	40
Tuskar Res	1
Ultramar	20

Mines	
Lonrho	20
RTZ	46

FT Share Service

The following changes have been made to the FT Share Information Service:

Additions:

Kleinwort High Income (Section: Trusts)

Do. Zero Div. Prf. (Trusts)

Deletions:

Apollo Watch Products (Industrials)

China & Eastern Warrants (Trusts)

Dean & Bowes (Industrials)

Flexello Castors & Wheels (Industrials)

Tranwood (Finance Land)

Tyndall Holdings (Finance Land)

Warringtons (Property)

4:00 pm prices October 4

NEW YORK STOCK EXCHANGE COMPOSITE PRICES

1991 High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
16⅞	9¼	AAR Corp	0.48	0.04	17	682	12⅞	12¾	12⅞	
18¾	14½	A L Labs A x	0.16	0.01	19	82	18	17⅞	18	+⅛
55¼	40⅞	AMP Inc	1.44	0.08	19	2526	49¾	48½	49⅛	
68⅝	44¾	AMR			10	4942	55½	54½	54⅝	-¼
2⅝	1	ARX			1	207	1⅝	1½	1½	
55	41½	ASA	3.50	0.07	14	917	49⅞	49	49⅞	+½
55⅜	39¼	Abbott Lab x	1.00	0.02	22	4654	54½	53	53	-1
14⅝	9⅞	Abitibi Pr	0.50	0.04	24	11	13¾	13⅜	13⅜	-⅛
11⅞	10⅜	ACM Gvt In	1.26	0.11		1038	11½	11¼	11⅜	
9¾	8¾	ACM GvOpp x	1.01	0.11		169	9⅝	9½	9½	-⅛
9¼	8¼	ACM Gvt Sp x	1.01	0.11		308	u9¼	9⅛	9¼	+⅛
11	9⅞	ACM Gvt Se x	1.26	0.12		687	10¾	10⅝	10¾	
8⅞	7⅝	ACM Man x	1.01	0.12		735	u9	8⅞	8¾	-⅛
12⅞	11½	ACM Manage x	1.35	0.11		327	12¾	12⅝	12⅝	
7½	4¾	Acme Cleve x	0.40	0.06	16	28	6¼	6⅛	6¼	
6	3½	Acme Elect			2	187	4⅛	3⅞	4	
40	22⅝	Acuson			23	1572	34½	32⅜	33⅝	+1¼
19¼	14¼	Adams Expr	0.73	0.04	0	48	18⅞	18¾	18⅞	+⅛
20½	17½	Adobe12Pf	2.40	0.12		8	19⅝	19⅝	19⅝	-⅛
9¼	6⅝	Adobe Res.			47	639	7¼	7⅛	7⅛	-⅛
38⅞	18	Ad Micro				21	31½	31½	31½	
14¼	4⅝	Ad Micro P	3.00	0.33	14	15111	9⅛	8⅝	9	+⅛
5⅛	2¼	Advest Grp	0.16	0.04	5	585	3⅝	3½	3½	
49⅛	31⅞	Aetna Lf x	2.76	0.08	7	2811	34½	34⅛	34½	+⅛
10⅝	6⅝	Affil A	0.24	0.03	44	1144	8	7⅞	8	+⅛
20⅞	12	Ahmanson	0.88	0.05	10	3490	17⅛	16⅞	17	
14⅞	2⅞	Aileen Inc			14	132	14⅜	14⅛	14¼	
74⅛	51⅞	Air Pr Chm x	1.56	0.02	14	679	67⅛	66⅝	67	+¼
30	16⅞	Airbne Frt	0.30	0.01	17	442	26⅛	25⅞	26	
19⅜	12½	Airgas Inc			102	97	16½	16⅜	16½	+⅛
15¼	10	Airlease x	1.86	0.13	7	26	13⅛	13	13⅛	
96½	88¼	AlaPw8 16	8.16	0.08		z100	96¼	96¼	96	+¾
25⅛	21⅛	AlaPw PfA	2.00	0.08		11	u25⅛	25⅛	25⅛	
108½	100	AlaPw9.44	9.44	0.09		z100	104½	104½	106½	+2
108	102⅝	Alab Pw 11				2	104	104	104	
[illegible]										

Continued on next page

NYSE COMPOSITE PRICES

Continued from previous page

1991 High	1991 Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
9⅞	6⅞	Safecard	0.15	0.02	8	175	8½	8⅛	8½	+¼
13¾	8¾	Safeg'd Sc			3	21	12¾	12	12⅛	+¼
37	25	SafetyKln	0.32	0.01	25	1368	27¼	26⅞	26⅞	+¼
21⅞	11⅞	Safeway			14	379	18⅞	18¾	18⅞	-½
4⅞	2⅞	SafewayWIS				132	4¼	4⅛	4¼	
35⅞	28⅞	StJoePaper	0.20	0.01	36	7	32⅞	32⅝	32⅝	+⅛
34¼	26⅞	StJosL&P x	1.66	0.05	11	23	31	30¾	31	+⅛
4⅛	1½	Salant Crp			0	17	3⅛	3	3⅛	
69⅞	43⅞	Sallie Mae	0.80	0.01	18	1689	59⅛	58⅞	58⅞	-½
19⅝	10⅝	Salomon Br	0.60	0.04		620	13½	13⅛	13⅜	-⅛
27	20⅝	SalomonInc	0.64	0.03		63516	23¾	23	23½	+½
45¼	37¼	SanDgo G&E	2.80	0.07	11	713	42⅞	42⅛	42⅞	+⅛
4⅞	2⅞	SantaFeEn r	0.40	0.13	20	5	3⅛	3	3⅛	+⅛
16¾	10¾	SantaFeERs x	0.16	0.01	22	930	11¼	d10¾	10¾	-¼
34⅝	25	SantaFePac	2.65	0.08	10	56	33⅞	33⅛	33⅜	-⅜
10¼	5⅛	SantaFeSth				4982587	9½	9⅛	9⅜	+¼
45⅝	29⅝	Sara Lee	0.94	0.02	20	2912	45	44¾	44¾	-¼
⅛	⅛	Savin Corp				01661	0.08	d⅛	0.08	+0.02
7⅞	1⅞	Savin 0.80	0.80	0.32		7	2½	2½	2½	+⅛
41	33½	Scana Corp	2.62	0.06	8	133	40⅞	40⅝	40¾	+¼
46⅞	36	Scecorp x	2.72	0.06	11	2658	44½	44⅛	44¼	
58⅝	40⅞	ScheringPl	1.32	0.02	20	4795	57½	57⅛	57¼	-⅛
74	50½	Schl'berger	1.20	0.02	26	3279	66	64⅞	65	-1
32⅞	11⅞	Schwab(C)	0.20	0.01	28	175	31¾	31½	31½	-⅛
8⅞	5⅞	Schwitzer			13	52	6⅞	6⅝	6¾	
[illegible]										

Price data supplied by Telekurs.

[illegible]

NASDAQ NATIONAL MARKET

4:00 pm prices October 4

Stock	Div.	P/E	Sls 100s	High	Low	Last	Chng
[illegible]							

AMEX COMPOSITE PRICES

4:00 pm prices October 4

Stock	Div.	P/E	Sls 100s	High	Low	Close	Chng
[illegible]							

MONDAY INTERVIEW

Socialist's market inclinations

Carlos Solchaga, Spain's finance minister, speaks to **Peter Bruce** and **Richard Lambert**

'I would be in favour of privatising most companies'

Mr Carlos Solchaga is a man inhabiting two contrasting worlds. Next week he will enjoy the kudos of becoming the first Spanish finance minister to chair the International Monetary Fund's Interim Committee when it meets in Bangkok. On the domestic front, however, he is the figure around which many of Spain's political controversies revolve.

He is constantly rumoured to be on the verge of being removed from office. This is because he not only irritates powerful ministers with his overtly conservative textbook market economics, but because he treats them like a father trying to hide the difficult facts of life from a child. Ministers and Socialist party colleagues sometimes wrongly assume he must be behaving in the same way to the prime minister Mr Felipe Gonzalez.

In fact Mr Solchaga briefs the prime minister at least once a week, providing the basis of the Mr Gonzalez's intelligence on the two issues about which he is most passionate – European union and the state of the economy.

Mr Solchaga feeds his prime minister the lines and the prime minister does the hard work persuading the cabinet.

"Felipe Gonzalez's role is crucial," he says. "He has something I do not – charisma and legitimacy in the party. Naturally I have to be careful not to create too many problems for him and it has sometimes been difficult for him [to sell conservative economics]."

Mr Gonzalez recently went on television to defend his finance minister amid repeated suggestions that the new deputy prime minister, Mr Narcis Serra, was being groomed to assume more responsibility for economic policy.

A graduate of MIT and a former economics professor, Mr Solchaga is a curious mix of politician and academic, who brings a highly individualistic approach to economic policy.Take privatisation.

"I have no ideological bias in favour of or against privatisation," he says. "The only bias I can have is that experience suggests that in most cases the public administration of enterprises is not better than private management. I would be in favour of privatising [for this reason] most of our companies but I would be against having a programme of privatisation. Buyers may then think one is up against a deadline and I do not want to create expectations on the part of my colleagues in the cabinet that there might be additional resources to be spent.

"We have sold shares in some companies and we are open to the idea that once the Corporacion Bancaria de Espana (a new banking giant being created by uniting all the state-owned financial institutions) is consolidated, to sell part of its capital. But I'll do it without a programme and without any political commitments."

It is this undogamtic approach that arouses so much anger among leftwingers in the Socialist party and in the trade unions. His explanation is quite straightforward: "I am a social democrat who believes in markets," he says disarmingly. "The problem with many social democrats is that they look at the markets with prejudice."

While it is becoming respectable to be a social democrat inside the socialist cabinet the same cannot be said for the party. But Mr Solchaga's patient patronage of bright young people around him both when he was industry minister in the first Gonzalez cabinet in 1982 and as finance minister since 1985 is beginning to pay off. The present industry minister is a close confidant and supporter. The head of the newly-created infrastructure ministry is a former deputy. The agriculture minister is sympathetic. Probably most important for Mr Solchaga's survival is the strong support given to him by the veteran foreign minister, Mr Francisco Fernandez Ordonez. "Solchaga," he says, "is doing an excellent job especially as he is doing it in the context of a socialist government."

Mr Solchaga is, if anything, growing stronger within cabinet, though he jokes that his recent election by Euromoney magazine as finance minister of the year might be a kiss of death. That prize was for keeping his head during the 1986-1989 boom after Spain joined the European Community. Instead of giving Spain its head and running up colossal bills, Mr Solchaga moved early to cool the economy with a fierce mixture of a credit squeeze, capital controls and high interest rates.

Today, he thinks inflation will end this year at about 5.5 per cent and next year at 5 per cent as Vat increases – forced on Spain by the EC harmonisation process – take effect.

The closer EC monetary union is, the stronger he needs to be. Tough negotiations with the unions on reforming the labour market lie ahead and the two sides deeply distrust each other.

"Our big problem is that we have very high structural unemployment," Mr Solchaga says. "We are trying to link the subsidy costs of unemployment (welfare) to retraining or recycling of labour. Our idea would be to oblige people getting any kind of unemployment subsidy to recycle or retrain themselves and then to reduce aid to those people who really do not try to find new jobs."

PERSONAL FILE

- **1944** Born in Tafalla, Navarre. Economics graduate, Complutense University, Madrid. Assistant professor of economics, Complutense University.
- **1967** Bank of Spain, research department.
- **1976** Head of research, Banco de Vizcaya.
- **1979** Elected to parliament for Socialist workers' party (PSOE).
- **1982** Minister of industry and energy.
- **1985** Minister of economy and finance.
- **1990** Chairman IMF Interim Committee.

He hopes that With an increasing number of employable people in the marketplace, the steep upward spiralin wages could be brought under control, but the labour negotiations pale into insignificance against the task Mr Solchaga and like-minded ministers believe must be tackled by Mr Gonzalez. That will be nothing less than changing the nature of public service in Spain, to toughen the conditions under which Spanish civil servants will have to work. "We have to start next year so that in five years, by the start of the third phase of monetary union, the problem can be solved."

Those changes could run the whole gamut from shaking up the university tenure system to the hours that civil servants work, subjects that Mr Gonzalez has never confronted.

"It is easier for us to change the institutional nature of markets, including the labour market or giving independence to the Bank of Spain, than to change the inheritance of the past," Mr Solchaga warns. "Our real problems lie in those things that require some kind of cultural change. I'm more concerned about the functioning of universities, about public education in general and the public administration in particular than maybe [I am] about changing the labour market."

But the savings that will be gained by dumping ingrained cultural inefficiencies might ease the balancing act that he faces as finance minister.

procedures

This requires him now to spend each peseta of the public purse on basic necessities such as infrastructure in order to guarantee that the economy is able to converge with leading EC members by the time monetary union is achieved. Part of this involves opening the country up to foreign investors but even this is beginning to alienate some sections of the business community. Mr Mario Conde, the thrusting young chairman of Banesto, one of the country's biggest banks, has begun accusing the government of "selling" the country.

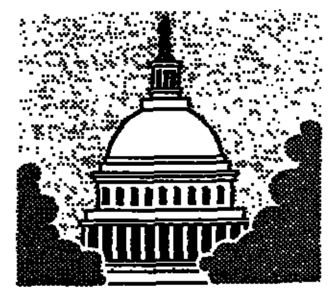
"One thing I am sure of is that I *support* foreign investment," says the minister. "It represents a process of learning for Spanish companies related to the investor. The change in the motor component industry has been fantastic. People who accuse us of having no industrial policy usually want protection and subsidies."

Not even a high current account deficit depresses him. "It should be looked at in a new light," he says. "Some 60 per cent to 70 per cent of the deficit is with the EC and as we move towards greater economic union this will have as much relevance as the balance of payments situation between Andalucia and the Basque Country. We are a province of Europe and that is the best thing that has ever happened to us."

Mr Conde is not so sure, saying that after years of the Solchaga treatment, inflation is where it was in 1988, the current account deficit is growing and high interest rates have so overvalued the peseta that exporters cannot export.

But these statistics fail to impress Mr Solchaga's vocal free-market supporters, men such as Mr Oscar Fanjul, chairman of the Repsol oil conglomerate, Spain's biggest industrial company "Solchaga is the guarantee that nothing crazy happens to this country," he says.

Market vs state in development



MICHAEL PROWSE on America

Most of the bankers converging on Bangkok this week for the International Monetary Fund/World Bank annual meeting doubtless believe the debate about how best to promote economic development is dead. They subscribe to the "new orthodoxy" of the 1980s, which says that government interventions do more harm than good. Except in the narrow sphere of social policy, poor countries should liberalise, privatise and allow markets to work their magic.

Achieving sustained growth in the Soviet Union, eastern Europe or anywhere else is thus largely a matter of politics. The challenge is not to devise new policies (the textbooks are written) but to overcome transitional difficulties and create the robust institutions required to implement conventional wisdom.

But is economic development this *cut-and-dried*? Is reliance on the short-run profit motive really a sure bet? The first hint that some rethinking is taking place – even in bastions of the new orthodoxy – came last month in a speech by Mr Attila Karaosmanoglu entitled Asia and the New Balance in Development Strategies. Mr Karaosmanoglu, then the World Bank's vice-president for Asia and now one of three managing directors under Mr Lewis Preston, the bank's new president, was responding to academic critics who argue that the success of east Asian newly-industrialising countries (NICs) reflects activist government policies. The surprise was how much Mr Karaosmanoglu conceded.

One of the critics he cited is Mr Stephen Smith, development economist and author of Industrial Policy in Developing Countries, a recent pamphlet* for the Economic Policy Institute, a Washington think tank. Mr Smith is part of a counter-revolution in development economics that is seeking to debunk the grander claims of the new orthodoxy.

The World Bank and others have tended to equate export-oriented development strategies with free-market policies and import substitution with government intervention. The unparalleled success of outward-looking Asian NICs – South Korea, Taiwan, Singapore, Hong Kong and Thailand – is thus depicted as a triumph for *laisser faire* doctrines while the relative failure of more inward-looking Latin American countries is seen as an inevitable consequence of excessive reliance on the public sector. The moral drawn is that trade liberalisation and small government are the keys to rapid development.

Mr Smith does not query the importance of export promotion but he rejects its identification with *laisser faire* economics. On the contrary all the NICs (with the exception of Hong Kong) have "actively intervened in various ways to promote specific types of manufactured exports of ever-increasing technological sophistication". Far from illustrating the virtues of free markets, their record shows that successful export-led growth requires "activist trade and industrial policies". For South Korea, Mr Smith cites 19 substantive forms of government intervention used to manipulate markets.

Why are activist policies required? The fundamental reason is that countries develop by deliberately transforming their comparative advantages. It matters what kinds of product a country exports, and under what conditions. The static models used in free-market analysis suggest countries should respond to existing world prices and produce whatever seems likely to generate an immediate profit. This has often led to excessive reliance on exports of basic commodities and near economic ruin when prices slump, as they did in the 1980s.

The east Asian NICs have been more interested in their dynamic comparative advantage. Governments have altered market incentives to favour advanced forms of manufacturing, recognising that this stimulates a chain of benefits including improved education, managerial expertise, higher labour skills and technological development. Rather than blindly liberalising across-the-board, they have deliberately got some prices "wrong" in order to promote particular sectors critical for longer-term development.

In defence, Mr Karaosmanoglu says many Asian advantages – such as reverence for education and a tradition of excellence and impartiality in the civil service – are not easily replicated. The few examples of effective intervention in Asia must be set against "consistent failure to succeed in these tasks elsewhere".

He says the bank's critics focus unduly on structural adjustment lending – the main innovation of the 1980s. But this "distorts perceptions so that all our advice is seen as urging government withdrawal and inactivity". In Asia at least, hard-edged programmes, with explicit conditions on import liberalisation and industrial deregulation, account for only a small proportion of planned lending.

But having made this half-hearted defence of bank policies, Mr Karaosmanoglu ends with a remarkable *mea culpa*:

"The east Asian NICs and their successful emulators are a powerful argument that a more activist, positive governmental role can be a decisive factor in rapid industrial growth. An urgent task for the World Bank is to perform more research into east Asian approaches to trade and industrialisation, including the experience of Japan. What is replicable and transferable must be brought to light and shared with others."

Now that Mr Karaosmanoglu occupies a pivotal position as a top aide to Mr Preston, let's hope he acts on his own advice.

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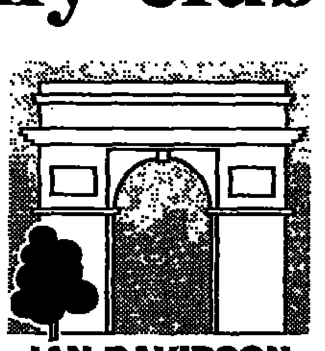


IAN DAVIDSON on Europe

The negotiations over a treaty on European political union (Epu) are back on track again, it seems, with a reasonable chance of a conclusion at the year-end summit at Maastricht. Last month the Twelve were temporarily derailed by ideological diversions, but now appear to have put histrionics behind them. Even Britain seems to be taking a constructive interest.

One dog is not barking, however, and that is the question of admitting new members to the club. When the Twelve sign their treaty on political union, they will be making all sorts of far-reaching commitments, in principle if not in practice, about foreign policy, defence, internal security policy, majority voting, and the powers of the European Parliament. They will also be making even more binding undertakings on economic and monetary union. But they will scarcely breathe a dicky bird about all those other European countries waiting outside which want to join.

This is rather a yawning lacuna in the agenda. The Twelve have been arguing furiously about the principle of a Common Foreign and Security Policy, but the argument has been more theoretical than real: whatever the treaty may say, the development of such a policy will be ultra-cautious, evolving over many decades. Enlargement is quite different: either it occurs or it doesn't; and a Community of 20, say, is intrinsically different from a Community of Twelve.

So far five applications for membership are already in the pending tray – from Turkey, Austria, Cyprus, Malta and Sweden. Finland is preparing to apply next summer; Poland, Czechoslovakia and Hungary will certainly apply immediately they think they have the ghost of a chance; and then there are the three Baltic states. Before we know where we are, the list of declared candidates will run to at least 20.

Quasi-federalists in Europe have tended to oppose admission of any new members. They think the sheer weight of numbers, and a colossal widening of political and economic diversity, would bring the Community to a halt. By the same logic, but for the opposite motives, anti-federalists have demanded the speedy opening of the doors to all.

As a driving force in the federalist camp, President Mitterrand is among the most hostile to enlargement; he professes to offer the hand of welcome, but has made clear that he would prefer to postpone it for "decades and decades". Mr John Major, the British prime minister, like Mr Jacques Chirac, leader of the French Gaullist party, opposes Mr Mitterrand's federalist ambitions, and therefore advocates early and extensive enlargement.

Of course, Messrs Major and Chirac are mainly talking for effect, the way politicians will. Enlargement requires the support of the Commission, agreement of 12 member states, agreement of 12 parliaments, and in future of the European Parliament as well. There is simply no chance of a sudden rush to admit a whole cartload of new members; and it is most unlikely any new members will be admitted until after the new treaties have been ratified (1992) and the single market completed (1993).

On the other hand, it is now clear that the Mitterrand policy of indefinite postponement is simply not on, because the Community is the only place there is. The pan-European conference on security and co-operation is a sterile child of the cold war; the Council of Europe is only a political anteroom to more interesting activities; and President Mitterrand's European confederation is a hollow phantasm. The Community alone is alive, growing and powerful; and that is why everyone wants to join.

What then is to be done? The worst possible solution would be for the Community to sit passively like a social security office, processing the queue of membership applications one after another. That way it would spend the next 20 or 30 years doing nothing except taking in new members, each time having to rearrange the institutional seating to accommodate the latest arrivals.

The next possible solution would be to sort the applicants into groups: Now, Later, and Never. By most measures, all seven Efta members ought to qualify for the Now category. Yet it sticks in the craw that neutral countries, which have grown rich and smug denying any political solidarity with their western neighbours, should now have the gross impudence to assert that their *continued* neutrality is not after all an impediment to Community membership.

There are two problems with such a rough and ready approach. The first is that the explicit selection of Efta countries implies rejection of the east Europeans. On political and moral grounds, this would be difficult to justify.

The second difficulty is that, while there should be no serious obstacle to the membership of any individual Efta country, the admission of seven new members would be massively difficult to digest, and would require far-reaching renegotiation of the EC treaties.

In the first place it would require a profound renegotiation of the implicit bargain between large and small countries. At present voting weights are heavily skewed in favour of the small countries, which account for seven out of 12 members; but in a Community of 19, there would be 14 small countries.

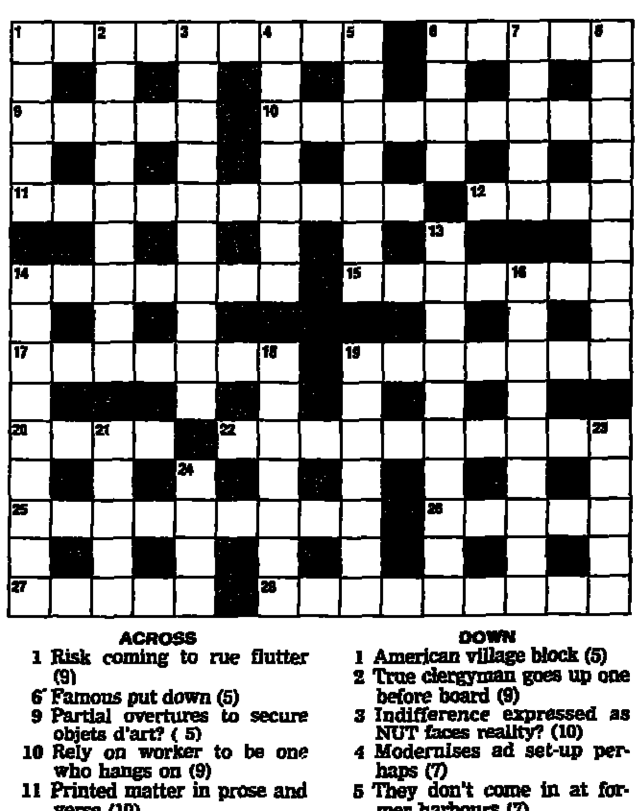
So either France, Germany, Britain and Italy would have to submit to being totally dominated by the small fry; or else the small fry would have to accept smaller voting weights. But in any case, the majority voting rules would have to be pushed much further, if the EC were not to be paralysed.

These questions cannot be solved before the new political and monetary treaties are signed. But the Maastricht summit ought to launch a coherent examination of the whole problem, without waiting for external pressures to become irresistible.

JOTTER PAD

CROSSWORD

No.7,665 Set by PROTEUS



ACROSS

1 Risk coming to rue flutter (9)
6 Famous put down (5)
9 Partial overtures to secure objets d'art? (5)
10 Rely on worker to be one who hangs on (9)
11 Printed matter in prose and verse (10)
12 Artist having second thoughts about box (4)
14 Patches up boats (7)
15 Weaving instrument with closed outlet (7)
17 State man to be avoided (7)
19 Naked in unusual act of entertainment (7)
20 First male architect (4)
23 Teacher having to mould unruly stream (4,6)
25 Wedding outfit for model writer (9)
26 Forbidden thanks to unwelcome sound (5)
27 Valued desert journalist (5)
28 The lady's catching birds at Kentish resort (9)

DOWN

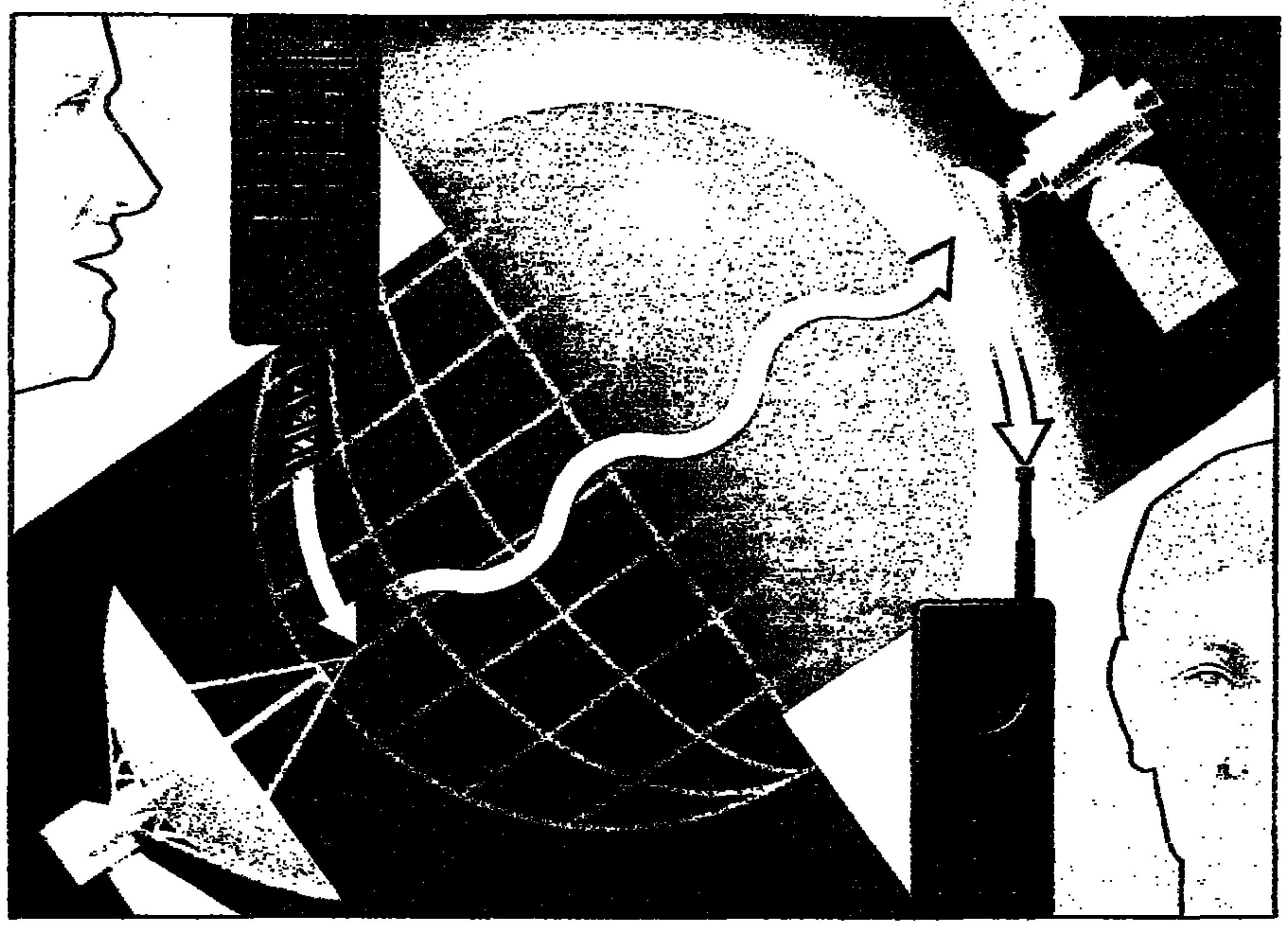
1 American village block (5)
2 True clergyman goes up one before board (9)
3 Indifference expressed as NUT faces reality? (10)
4 Modernises ad set-up perhaps (7)
5 They don't come in at former harbours (7)
6 Negative-sounding Teutonic figure (4)
7 Wanderer taking ship (5)
8 It may clean put a chap off (9)
13 Food conveyer used by stupid American attendant (4-6)
14 Letter from noted eccentric (9)
16 Convert a belt into record-player (4-5)
18 Doctors accepting deliveries from cattlemen (7)
19 Place to come round for estimate (7)
21 Almost a boxing-match? (5)
23 Plunders castles (5)
24 Accustomed to being employed (4)

The solution to last Saturday's prize puzzle will be published with names of winners on Saturday October 19.

WORLD TELECOMMUNICATIONS

For decades telecommunications has been an entrepreneurial backwater. Now there is a new sense of dynamism. **Hugo Dixon** looks at privatisation, deregulation and globalisation which are transforming the structure of this expanding industry

The sleeping giants awaken



THE sleeping giants of the world telecommunications industry are awakening. There is a new sense of dynamism and the industry is in the throes of a massive restructuring.

Although telecommunications has always been in the forefront of technology, for decades it has been an entrepreneurial backwater. Monopoly practices and state ownership were the culprits.

The industry's main building blocks were the national post and telecommunications organisations (PTOs). Owned by governments, they had little incentive to improve efficiency. Granted monopoly franchises at home, they faced no competition and so were able to introduce innovations and improve service at their own leisurely pace. And because PTOs in other countries also had monopolies, there was little opportunity to expand abroad even if they had wanted to.

Three interwoven trends – privatisation, deregulation and globalisation – are changing this picture:

■ The PTOs are increasingly being split into separate post and telecommunications administrations, with the telecommunications part being sold to the private sector. In 1990, telephone companies in three countries – responsible for 9m phone lines – were privatised, according to Booz-Allen & Hamilton, the management consultants. Between 1991 and 1993, companies in a further 26 countries, responsible for 95m lines, are expected to be privatised;

■ Monopoly rights are being abolished, or at least limited;

■ Freed from government control at home and with new opportunities opening up abroad, the telecommunications companies have started to expand globally. According to Booz-Allen, there were 67 cross-border telecommunications acquisitions in 1990 worth \$16.5bn, up from 50 deals worth \$2.7bn in 1989 and only 11 deals worth \$116m in 1988.

This revolution in the structure of the industry is taking place against the backdrop of a market that continues to expand at 10-15 per cent a year, driven by technological advances and increasing demand.

The world telecommunications services market was worth \$279bn in 1990, up from \$175bn in 1986, and is forecast to reach \$567bn in 1995 by the Telecommunications Research Centre, the UK-based industry analyst. Meanwhile, the global equipment market has grown from \$88bn in 1986 to \$127bn in 1990 and is forecast to reach \$169bn in 1995.

New technology is cutting costs, improving quality and leading to new services. The most explosive growth has been in mobile communications and data communications, spearheaded by the facsimile machine and the personal computer.

Meanwhile, telecommunications is increasingly pervading all parts of the world economy. The use of telecommunications has been most intense in the services industries such as finance, which are the fastest growing industrial sectors, but manufacturing has also become more dependent on telecommunications. The groundwork for this revolution was laid in the 1980s, starting with the break-up of American Telephone & Telegraph and the privatisation of British Telecom and Japan's Nippon Telegraph and Telephone.

But the process is only partly completed and the fruits in terms of lower prices, wider choice and better service will only be tasted in full by customers during the 1990s.

The motives for privatisation have been mixed. In the UK, for example, there was a conviction that private ownership would be more efficient than public ownership, combined with a belief that a private company would be better able to control the trade unions.

As privatisation has spread from the developed to the developing world – with governments in Latin America, eastern Europe and Asia joining the bandwagon – other considerations have become more prominent. In Latin America, a principal concern has been to raise hard currency to reduce the high level of sovereign debt, while in eastern Europe there is a realisation that governments do not have the funds to modernise and extend the inadequate networks.

Privatisation has been one of the main forces behind deregulation. While governments were prepared to tolerate state-run monopolies, they have been less willing to give their blessing to private monopolies.

But even governments which have retained state ownership of their telephone companies have found it necessary to liberalise the market. Germany, for example, argued that advances in technology – which are leading to a proliferation of new services and allow telecommunications signals to be carried in ways that bypass the PTOs' traditional fixed networks – meant that it was no longer possible or desirable to maintain a strict monopoly. Since reunification, the policy of freeing private enterprise has been accelerated.

Liberalisation has proceeded in phases. Most governments have stopped short of abolishing monopoly rights completely. The European Commission has only required competition in terminal equipment and data services, while the UK initially licensed only one rival to BT in the basic phone market, Mercury Communications. But the EC is due to examine whether remaining monopoly rights to provide infrastructure and voice services should be abolished, and the UK has now abandoned the BT/Mercury duopoly.

Liberalisation has provided the momentum for more liberalisation. Where competition has proved a success, governments have had the courage to take more radical action. Where it has failed, the argument that the original liberalisation was not sufficiently thoroughgoing has often proved persuasive. Meanwhile, the PTOs' new rivals have pressed for more freedom to compete.

However, introducing competition has been more difficult than expected. Even where monopoly rights have been abolished, telephone companies have retained considerable power to frustrate rivals.

To redress this imbalance in power and to ensure fair play many governments have established regulatory bodies. But their task has not been easy and they have needed to take tougher action to protect customers and competitors from abuses of monopoly position.

The power of the telephone companies to frustrate competition has been most apparent in the international arena. Even where a government has allowed competition in the provision of international phone calls, such as the US, this has had little effect because the telephone companies in the foreign countries have usually remained monopolies.

Furthermore, the world's telephone companies have various cartel-like practices designed to keep competitors out of the market and which have the effect of maintaining prices at high levels.

Nevertheless, the cartel is beginning to reform itself, partly in response to pressure from the outside and partly because the telephone companies are breaking ranks.

The main telecommunications companies all have strategies for global expansion. In fulfilling these, they will turn from insular monopolies into competing global organisations. Instead of sleeping in their back yards, the giants will invade each other's turf.

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Editorial Production: *Roy Terry*
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Cartoons: *Roger Beale*
Graphics: *Bob Hutchison*

WORLD TELECOMMUNICATIONS 2

Hugo Dixon on the high price of international phone calls

Cartel may not yet be broken but it is cracked

THE HIGH price of international telephone calls has become one of the most controversial issues in the world telecommunications industry over the past year.

An investigation by the Financial Times started the controversy by disclosing that public phone companies around the world were overcharging their customers between $10bn and $20bn a year. International call prices, which are typically two to four times more than costs, are kept high by a series of cartel-like practices.

Some of the phone companies have sought to justify the prices they charge on the grounds that the extra profits are used to subsidise other services. Others have said they wish to cut prices but are prevented from doing so by the complicated accounting rate system which determines how the revenues from international calls are shared between the phone companies.

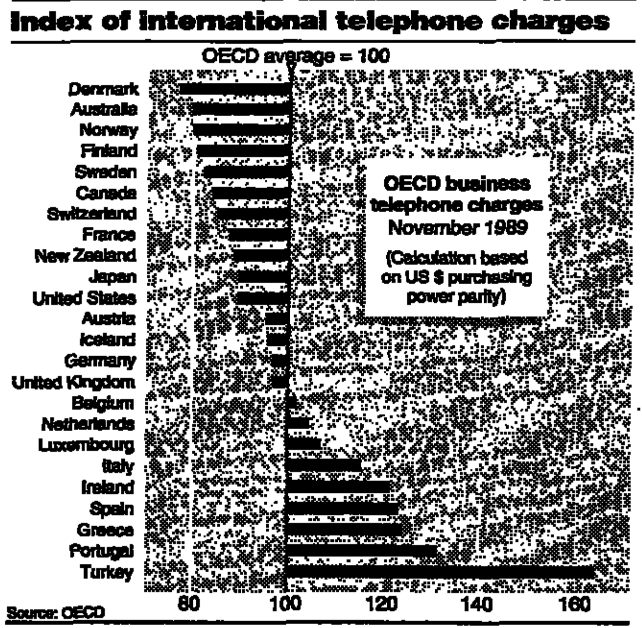
The cartel has come under attack from many quarters. Although not yet broken, it is cracked.

The US government, particularly the Federal Communications Commission, has been leading the campaign. It believes that the cartel's practices are undermining its policy of introducing competition into the telecommunications industry. It is also angry because US operators pay out about $3bn a year more than they receive under the accounting rate system.

The European Commission has also been investigating whether the cartel is breaching anti-trust provisions of the Treaty of Rome. It is concerned that the high prices of cross-border calls within the European Community undermine its plans to create a single European market. It has therefore asked Community phone companies to provide it with information on costs, accounting rates and traffic flows; it has threatened to fine them if they do not comply.

In parallel, the Organisation for Economic Co-operation and Development (OECD), which groups 24 industrialised nations, has been lobbying for changes. A recent internal document said that accounting rates played the same role as customs tariffs in constraining the flow of goods.

Index of international telephone charges



Source: OECD

The International Telephone and Telegraph Consultative Committee (CCITT), the Geneva-based phone club which is responsible for some of the cartel practices, held a meeting in September to discuss proposals for changing the accounting rate system. But it failed to agree any substantial reform. The essential problem is that accounting rates on most routes are considerably above costs. Because accounting rates determine how much telephone companies have to pay their counterparts abroad for delivering international calls, their high level acts as a brake on any company which wishes to cut the prices it charges customers.

Some companies have sought to justify prices on the grounds that the extra profits are used to subsidise other services

But reforming the system will not be easy because of vested interests. Counterbalancing the large deficits experienced by countries such as the US, Australia, Canada and Sweden are surpluses enjoyed by others. In particular, many developing country telephone companies have become dependent on the payments they receive as part of the accounting rate system, which are often large in proportion to the size of their telecommunications industries.

The last year has seen cuts in accounting rates on a number of important international routes, although they have still generally a long way to fall before they match costs. US carriers, in particular AT&T, have negotiated phased reductions of 50 per cent or more with the UK, Spain, the Netherlands and Hong Kong. Less dramatic, though substantial, reductions have been negotiated with Sweden, Ireland, Australia and Singapore. Meanwhile, the TEUREM group of European and Mediterranean telephone companies has agreed to phased cuts of about 50 per cent in intra-European accounting rates.

The CCITT has already embarked on a far-reaching reform of another cartel practice – the restrictions on the use of international private circuits. These were designed to prevent private companies bypassing the international services provided by the cartel's members. In particular, they limited the ability of competitors to engage in "resale", which involves buying or leasing private circuits in bulk and then selling on capacity to customers.

The reform will not automatically open the floodgates to competition because most countries have their own regulations, in line with the previous CCITT recommendations, which prevent resale. However, the US and New Zealand already have liberal approaches to private circuits, and there are expectations that the UK, Japan, Canada, Australia and Sweden will follow suit.

Moreover, customers are beginning to enjoy lower prices. Last month, British Telecom cut its international prices by an average of 10 per cent – calls to the US were cut by as much as 20 per cent – following pressure from Oftel, the UK telecommunications regulatory body. There have been substantial cuts in Japanese prices, reductions in US-Canadian call charges and some Italian and Spanish prices have fallen. But the changes of the past year have, by and large, yet to feed through to customers.

One explanation for this is that most countries' phone companies still have a monopoly on international traffic. Reforms in accounting rates are removing a brake on cutting prices, but they do not on their own give an incentive to reduce charges.

Even countries which have been in the forefront of telecommunications liberalisation have been wary of allowing unrestricted competition in the international arena. The UK has held back from allowing more competition to BT and Mercury Communications until

it is satisfied that foreign monopolists will not be able to abuse the UK's more open market to their advantage. Japan has licensed only three international operators. And the US is delaying allowing PanAmSat, a private US satellite company, to compete on equal terms with Intelsat, the international satellite organisation owned by the public phone companies, on the grounds that it could damage national security.

Nevertheless, indirect competition is growing. Multinational companies often route their calls around their private networks before putting them onto the public networks to take advantage of the cheapest prices, even though this may technically contravene some of the regulations. And although the cartel's members may have qualms about competing directly against each other in international services, they have no reservations about "hub competition" – attracting business traffic away from their counterparts' networks by stressing their better facilities and lower prices.

The reform will not automatically open the floodgates to competition because most countries have their own regulations

The cartel may not yet be broken. But, with competition seeping through its cracks, its demise is only a matter of time.

TELEGEOGRAPHY

New perspective on patterns of power

THE UK is a bridge between North America and Europe; the Soviet Union is an island connected to the rest of the world by a weekly ferry service; India is a desert.

From the perspective of traditional geography, such assertions seem mad. It is the UK which is an island, while the Soviet Union is a vast continental land mass and India is a densely populated country criss-crossed by major rivers.

But such are the implications of "TeleGeography", which examines the flows of telecommunications traffic around the world. Unlike classic geography which charts rivers, mountains and political frontiers, TeleGeography tracks phone calls, faxes and computer-to-computer communications.

Studying who is talking to whom gives a new perspective on the patterns of power and influence in the world. Sometimes, this is more revealing than traditional maps.

A quarter of all the UK's international phone calls go to North America and 43 per cent to the European Community, emphasising the fact that Britain is psychologically torn over where it belongs. Most transatlantic private circuits are routed through the UK – which many multinationals choose as their telecommunications hub – making the country a "tele-bridge" between the two continents.

The Soviet Union was until recently a "tele-island" in that its telecommunications network was virtually cut off from the rest of the world. In 1988, Soviet citizens made fewer than 100m minutes of phone calls to the outside world, compared with the 5.4bn minutes made from the US, a country with a smaller population.

The importance of telecommunications and the Soviet Union's island status were underlined during August's unsuccessful coup. The ability of the democratic forces and journalists to communicate with the outside world was one of the main factors behind its failure. Testimony to the coup leaders' bungling approach was that they neglected to cut off international communications – which would have been simple given that all traffic is still channelled through a single exchange in Moscow. It now seems that building more international exchanges will be a priority for all the republics.

India is a "tele-desert" because it is almost entirely bereft of telecommunications facilities rather than simply lacking international connections. There are fewer phones in India than in London.

TeleGeography is a powerful tool for understanding the modern world because of the way that telecommunications has infiltrated virtually every branch of human activity. The one billion telephones linked together by networks of cables and satellites constitute the nervous system of the global market. The shift from an industrial society, which added value mainly through processing raw materials, to an information society, which adds value through processing information, is partly responsible for the growing pervasiveness of telecommunications.

A quarter of all the UK's international phone calls go to North America

Most economic activity touches the telecommunications network at least once. For example, information on prices is transmitted by phone, deals are negotiated over video links, products are ordered via electronic data systems and designs are exchanged by fax. In some services industries, such as trading foreign exchange, the telecommunications network has become the market itself.

The growing pervasiveness of telecommunications is particularly prominent on an international basis. The arrival of good quality international communications is behind the globalisation of world industry. The total volume of international traffic has increased sixfold over the past decade to 35bn minutes a year and will rise to 60bn-70bn in 1995, according to a report* by the London-based International Institute of Communications.

TeleGeography's perspectives can be informative in three main respects.

■ First, TeleGeography can reveal the networks of influence in the modern world. Economic, political and social life is increasingly organised on the basis of networks. But not all networks are equal. Some are more productive than others and some people control the networks while others are on their peripheries. TeleGeography charts the contours of these networks.

■ Second, tracking telecommunications traffic may help policy makers pinpoint more accurately turning points in the economic cycle. Recently, there has been growing disillusionment with more traditional economic statistics because they take a long time to compile and policy can be based on out-of-date information.

Telephone traffic statistics potentially overcome this problem. The phone companies have the capacity to compile statistics on an almost instantaneous basis. Moreover, such statistics encompass activity in the services industries which is often not properly captured in traditional economic measures.

■ Finally, TeleGeography gives a perspective on public policy priorities. Since the main source of economic value in the information age is the production and transmission of information, education and network development are seen as political imperatives. If people are uneducated, they will be unable to participate in the modern economy. But, equally, educated people in Third World countries will find themselves progressively marginalised unless they can plug into the global network.

The Global Telecommunications Traffic Report, 1991, IIC, Tavistock House South, Tavistock Square, London WC1H 9LF, £245.

Hugo Dixon and Greg Staple

WORLD TELECOMMUNICATIONS 3

World Bank expresses concern about indications that investments are becoming too speculative

Wave of privatisations sweeps the globe

A WAVE of privatisations is sweeping the world's telecommunications markets, as governments seek to sell all or part of their state-owned telephone companies.

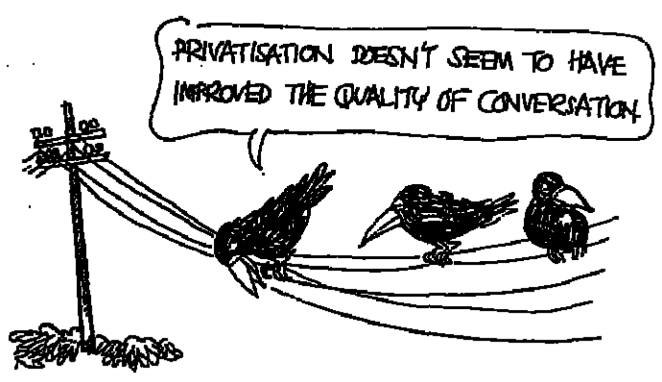
The volume of privatisations threatens to exhaust potential buyers as competition mounts for the limited pool of funds.

The past year has seen the privatisation of the telephone companies of Argentina, Mexico and New Zealand – companies serving a total population of 125m.

Since 1984, the market has already absorbed such large privatisations as British Telecom, Teleglobe Canada and Nippon Telegraph and Telephone Co.

Telephone companies in Venezuela, Australia, Hungary, Sweden, Portugal and Pakistan are among those moving towards at least partial private ownership.

It is estimated another 25 telephone companies will be targeted for full or partial privatisation by 1995 – including such giants as Germany's Deutsche Bundespost Telekom.



The required investment for these companies would top $145bn, according to the Telecommunications Research Centre, of West Sussex.

While dozens of banks, telecommunications equipment manufacturers, foreign telephone companies and other investors rush to examine each privatisation, relatively few invest in overseas telephone companies.

The main corporate investors include Telefonica, Cable & Wireless and the US Bell companies.

Banks have less and less conventional equity funding to invest in such companies, although they continue to rely on other means such as swapping sovereign debt for equity.

Another vehicle for financing has been the world's stock exchanges, where the privatisations of BT and NTT were transacted.

World telecommunications investment has historically fallen short – particularly in the developing nations where it is needed most.

In addition to privatisation, that investment comes in the form of project loans from the World Bank and other multilateral and bilateral lending institutions, financial packages tied to multi-million dollar equipment sales and the telephone company's own revenue stream.

Some $26bn should be invested annually throughout the 1990s to reduce the gap between supply and demand in developing nations, according to the International Telecommunication Union. Only $12bn is being invested.

In such an environment, many governments in developing nations will find it difficult to attract investors. For the most part, the state-run telephone bureaucracies in developing nations are overstaffed, under-managed, subject to government interference and chronically short of investment capital.

The networks they run reflect their organisational and national shortcomings. In Africa's poorest nations, for example, fewer than one in 1000 individuals has a telephone.

Only 31 per cent of the local calls placed in Indonesia are received. More than 2m potential customers are on the waiting list for telephone service in Poland.

Government officials in developing regions have accepted that they must streamline their organisation and increase investment in their telecommunications infrastructure as a means of improving their overall economy.

But the decision to privatise often comes at the end of a political battle. Residual public relations, labour and management issues can complicate the effort to run the company efficiently.

The risks and compensations are exemplified by the privatisation of Pakistan Telecom Corp. Potentially problematic conditions outlined in the privatisation document include: adherence to the antiquated Pakistan Telegraph Act of 1886; a reference to the Pakistani law offering compensation in case of re-nationalisation; government control of pricing; and obligations to abide by the country's rigid labour laws.

On the plus side, potential buyers are promised majority control, a 3-year tax holiday and 7-year monopoly and

It is estimated another 25 telephone companies will be targeted for privatisation by 1995

import exemptions.

Telephone companies in advanced nations carry their own risks. In New Zealand, for example, the amount of market competition introduced with the privatisation of Telecom Corp. of New Zealand has caused concern about Telecom Corp's profitability. In Japan, the share price of NTT has plummeted from a high of about $21,000 in late 1988 to about $5,780 – again in the face of competition.

The seven-year-old privatisation of British Telecom faced a threat of another sort: intentions to re-nationalise the company were periodically pronounced by the opposition Labour Party until as recently as August.

But the rewards of investing can also be high. Well-run telephone companies provide high returns on investment. With an adequate structure for telephone tariffs, investments often yield an annual return of 15 per cent or more, according to the World Bank.

For some companies, such as Spain's Telefonica, overseas investments can be part of a larger strategic mission to cement economic ties in countries with common languages and cultures.

Investing overseas can also provide growth opportunities for telephone companies whose markets are slowing down. The less developed a national network, the greater its growth potential.

Despite the opportunities, many potential investors are eschewing the expensive purchase and overhaul of existing telephone companies and networks.

Instead, they seek licenses to build new cellular systems, high-speed networks serving urban business communities, private satellite networks, paging systems and new long-distance networks linking cities.

Such licensing and franchising, in addition to providing investors with a less expensive entry into a nation's telecommunications market, can also be more politically acceptable to a nations' establishment, trade unions and voters.

They can also protect national governments from the investor's shortcomings.

While it is too soon to tell how well private investment is working in developing nations, some World Bank officials are expressing concern about early indications.

One case has brought into question the stability of new ownership arrangements. Bond Corporation Internationa sold its 50.2 per cent stake in Compania de Telefonos de Chile SA only two years after its purchase. The price Bond secured from Telefonica – $391m, up from the 1988 purchase price of $267m – has caused the World Bank to worry about telecoms privatisation becoming too speculative.

In other cases, the foreign telecommunication company's commitment to manage the local telephone company's turnaround has been called into question – especially when the foreign operator has only a minority stake in the project, but overall responsibility for project management.

In these and other instances – from Chile to the UK – the potential and pitfalls of privatisation will only become clear within five years or more, as the proliferating breed of private telephone companies perform in the marketplace.

Karen Lynch

CommunicationsWeek International

Past and future privatisations of public telecommunications carriers

Date	Country	Access lines (000)
Pre-1990	Canada	13,955
	Chile	625
	Hong Kong	2,191
	Japan	51,127
	Spain	10,972
	UK	24,400
	US	129,709
Total		232,979
1990	Argentina	3,176
	Mexico	4,162
	New Zealand	1,452
Total		8,890
Pre-1991	Cote d'Ivoire	70
	Hungary	858
	Malaysia	1,248
	Puerto Rico	872
	Singapore	939
	South Korea	10,486
	Uruguay	345
	Venezuela	1,458
Total		16,276
1992	Colombia	2,065
	Israel	1,472
	Kenya	157
	Netherlands	6,466
	Nigeria	250
	Portugal (TLP)	1,110
	Saudi Arabia	1,210
	South Africa	2,866
Total		15,596
1993	Australia	7,420
	Belgium	3,525
	Brazil	8,434
	Czechoslovakia	2,125
	Denmark	2,792
	Ireland	834
	Poland	2,953
	Turkey	4,921
	Germany	29,840
	Portugal (CTT)	968
Total		63,812

Source: Booz. Allen & Hamilton

Profile: International Telecommunication Union

Need for dynamism

HOW CAN the oldest of all inter-governmental organisations keep pace with one of the world's most dynamic industries?

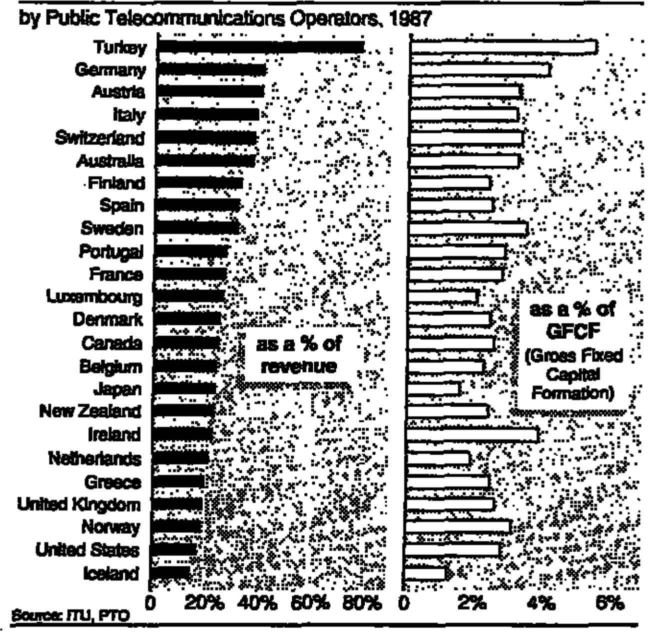
Since 1865 the International Telecommunication Union has been regulating and co-ordinating the flow of global information. As a specialised agency of the UN it was for many years the sole international institution in telecommunications.

By sharing information, developing standards, and adopting regulatory provisions that represented the common rules of the business, the Geneva-based organisation played a unique part in the development of today's worldwide telecommunications network. But now the ITU is having to adapt to a new and dynamically shifting environment.

In little more than a decade a combination of technical, economic, and regulatory forces have swept away assumptions that have underpinned the sector for more than a century.

Telecommunications capital investment

by Public Telecommunications Operators, 1987



Source: ITU, PTO

Established in an era when the main policy goal was in achieving universal telephone service the ITU was designed to serve the interests of national governments and monopoly telephone operators.

But the accelerated trend towards the privatisation and liberalisation of markets has suddenly brought many new and competing players on to the telecommunications scene.

At another level, technological convergence has eroded the once stable borderlines between broadcasting, telecommunications and computing.

For the ITU this has been further complicated by the fact that wealth creation and competitive edge are seen as dependent on the efficient use of telecommunications and information technology.

While the telecommunications sector in its own right is already one of the largest revenue producers in most economies, the communications infrastructure it provides has become even more important in ensuring the success of global business enterprise.

This infrastructure is now being leveraged by financial, commercial and industrial enterprise to organise and manage business in a way that moves beyond traditional – national, political or institutional. The process has created serious problems of definition for multilateral, inter-governmental agencies such as the ITU.

At the same time, there has been a growing awareness that telecommunications has become so vital for competitive global business that it can no longer be left to one body.

In practice, failure to react quickly to the new environment has already led organisations such as the European Community, the Organisation for Economic Co-operation and Development, and the General Agreement on Tariffs and Trade to encroach on ITU activities.

The EC, OECD and GATT have all called for reform of ITU restrictions inhibiting the growth of value added network services. The global framework, which has emerged, already treats telecommunications specifically in the context of traded goods and services.

The ITU's response has been handicapped by an unwieldy bureaucracy. The practice of achieving "consensus by exhaustion" among its 164-nation membership in marathon sessions has worked against radical change. And the union continues to operate under procedures that are, in many cases, more than 50 years old.

The controversial system for international accounting rates, whereby a negotiated sum is split between two telephone operators for each international call, is one example. A legacy of the old regime of monopoly carriers, the system has been criticised as penalising high traffic volume, the growth in international traffic, and low-cost operators.

Rapid technological change has exposed the underlying weaknesses of the ITU's two permanent standards-making bodies, the International Telegraph and Telephone Consultative Committee (CCITT) and the International Radio Consultative Committee (CCIR).

While the convergence of fixed and wireless network technologies has led to a duplication of work between the CCITT and CCIR, both have struggled under budgetary pressures, growth in the volume of work, and the threat of their role being eclipsed by new regional standards institutes, such as the European Telecommunications Standards Institute, the United States T1 Committees, and Japan's Telecommunications Technology Council.

At the same time, the developing countries representing the vast majority of the ITU's

Telecommunications has become so vital it can no longer be left to one body

membership have expressed frustration that their needs are not being met. They see the appalling gap between the growing sophistication of networks of the industrialised world and the paucity of basic network resources in the developing world. For such countries the overriding aim is to secure better funding and technical assistance in establishing a skeleton infrastructure.

It was against this background that a special high-level committee delivered recommendations for the wide-scale reform of the ITU earlier this year. Essentially, these recommend a broad restructuring of the organisation into three new working directorates to deal with:

- Standards embracing all the activities hitherto undertaken by the CCITT, plus those network quality issues now dealt with in the CCIR.
- Radio communications including the current CCIR radio activities, plus the frequency spectrum allocation responsibilities of the ITU's International Frequency Registration Board.
- Development with the integration of the functions of the ITU's Centre for Telecommunications Development and the Telecommunications Development Bureau.

The reforms also envisage special new development and business advisory groups to broaden external input on ITU activities, as well as a new strategic planning and policy unit. Overall, the recommendations should give Mr Pekka Tarjanne, ITU's secretary-general, scope to effect the necessary cultural reforms within the organisation.

Significantly, however, the report notes that while the ITU still has a leading role to play in facilitating inter-governmental co-operation to deal with the broader issues of the global information economy and society, it can no longer be expected to play the leading role since no single international organisation has, or effectively could have, that broad a mandate.

Rather, says the report, it should play a stronger and more catalytic role in stimulating and co-ordinating co-operation between the increasing number of regional institutions concerned with telecommunications in the standards-making and radio regulation fields. In field of development, the ITU is urged to seek to foster much closer ties with the private sector and specialised financial institutions such as the World Bank and the European Bank for Reconstruction and Development.

But while the committee's recommendations in many ways set a precedent for the future reform of other agencies within the UN multilateral system, they steered clear of by far the most contentious area of ITU activity.

Recognising the difficulty of drawing a clear dividing line between the technical aspects of telecommunications and wider economic and trade policy implications – -such as the need for ITU and GATT continue working co-operatively together – the committee nevertheless failed to address the wider implications of the ITU's regulatory function, beyond simple regulation of the world's radio frequency spectrum.

Specifically, as the forum for the world's monopoly telephone operators, the ITU's role in regulating tariff and supply conditions for international telecommunications services will become more and more problematic as global competition intensifies. And, although revision of some restrictive ITU regulation is underway, the long-term involvement of the organisation in international regulatory affairs may prove untenable.

Whether the ITU can remain a credible force in world telecommunications will depend both on the determination of its 164 members to see reform through and, equally, on its future willingness to adopt the kind of rules and standards that allow for diversity, fair competition, innovation and growth at a truly global level.

Denis Gilhooly

CommunicationsWeek International

Profile: PANAMSAT

The sky's the limit for an independent

AFTER many years of what was almost a one-man campaign to break the international satellite monopoly, Mr Rene Anselmo, through his telecommunications company PanAmSat, has won a victory which he hopes will pave the way for important changes.

Mr Anselmo, an entrepreneur who made about $100m in the Spanish language television network, founded PanAmSat in 1984.

Before PanAmSat launched its satellite in 1988, using $85m of Mr Anselmo's own money, Intelsat was the only provider of long-haul international satellite telecommunications in the US.

PanAmSat is still the only independent international satellite operator to have launched its system, although others plan to follow suit.

From the birth of the satellite age in the 1960s, Intelsat has had a stranglehold on the telephone-switching network.

Intelsat, founded in 1965, is a user-owned co-operative involving 119 nations. In the US, consumers get access to Intelsat only through Comsat, which receives a fee for its linking services. Comsat has the sole right of access to Intelsat and Intelsat's monopoly is protected by regulations which prohibit separate systems from carrying public switched traffic. Mr Anselmo says: "The monopoly was set up in the 1960s so that the free world would have communications systems, but it should have had a five-year life span."

There are not many satellite systems mandated to carry public switched traffic and these are typically backed by PTOs or their governments. Examples include the Intersputnik satellite system between the Soviet Union and other countries, and Arabsat in the Middle East.

PanAmSat has steadily battled the regulations which give Intelsat dominance in the international market for satellite telephone calls and switched-data transfers.

PanAmSat argues that it is unfair that telephone companies are allowed to compete with Intelsat for public and private switched traffic carried on fibre-optic cable under the ocean, but PanAmSat is prevented from doing the same using its satellite.

Mr Anselmo says that his goal is to unravel Intelsat's monopoly so that Intelsat acts as any other private company in a competitive world. "There is no other trade association in history that has sat down and made rules that everyone must abide by," he said.

PanAmSat is allowed to transmit private business traffic through its satellite, but freer access to public network traffic would significantly increase its earning potential. Last year public traffic contributed about 65 per cent of Intelsat's $498.6m revenues.

According to the company, PanAmSat offers a number of services not provided by Intelsat.

For example, PanAmSat customers manage and operate their transponders, designing and operating their own satellite networks, which gives them control of both the ground and space segment.

On this page and the next page FT writers investigate new players on the international telecommunications scene — from the US, Hong Kong and Sweden

Furthermore, the company says its signal is stronger than Intelsat's in Latin America and may be received directly using on-premise earth stations, which help customers avoid the substantial charges levied by local PTT for down-linking the Intelsat signal.

The company has a growing base of consumers such as CNN, which uses PanAmSat to transmit pictures from far-flung bureaux, and businesses such as General Electric, which uses the system to link its world-wide operations.

In 1990, the company earned more than $600,000 on revenues of $16.7m. This year, profits were bolstered by the Gulf crisis, which helped the company turn in first quarter earnings of $5m against a loss of $1.3m a year earlier, on revenues which grew four-fold to $9.1m.

Mr Anselmo's fighting spirit sets the tone of his company. Described by his own company as a maverick, Mr Anselmo, 65, has had a colourful past.

His curriculum vitae includes joining the Marine Corps at the age of 16 and serving as a tail gunner in the Second World War in the South Pacific. Mr Anselmo also holds a degree in theatre and literature from the University of Chicago.

The company is appealing against a ruling in the $1.5bn anti-trust lawsuit it brought against Comsat.

PanAmSat alleges that Comsat attempted to limit competition in the market for satellite transmissions. A decision on the appeal is expected later this year.

In April PanAmSat won the right to carry voice and data traffic inter-connected with the public-switched network, but only for 100 64-kilobit-per-second circuits.

The Dominican Republic has already ordered 24 of these on behalf of Tricom, a Santo Domingo-based private communications company.

Tricom uses PanAmSat to provide switched and private-line voice services, as well as an 800-type service, from the US to the Dominican Republic.

Mr Anselmo views this initial victory as little more than a public relations exercise. "They are operating 20,0000 circuits. Why should there be a limitation? One hundred lines will bring in about $1m a year."

Furthermore, PanAmSat is limited to providing this service only between its US base and the Caribbean or eastern Europe.

Mr Anselmo will continue to lobby Congress for more complete, worldwide competitive rights. "We are fast, we have better technical quality and better service at a lower cost. Only regulations stand in our way."

In the meantime the company is forging ahead with its expansion plans. Mr Anselmo recently created Alpha Lyracom Space Communications to expand his operations.

The PanAmSat satellite now links North America, South America and Europe. In August the company signed a $300m contract with Hughes Aircraft to make three satellites for PanAmSat's international services.

Hughes Communications operates satellite services in the US and Japan. As part of the deal, the two companies plan to direct traffic to each other.

Hughes will build three satellites for PanAmSat which will be positioned over the Atlantic, Pacific and Indian oceans in 1994.

PanAmSat is lining up about $600m to cover manufacturing, launching and insuring the satellites. Hughes will also contribute money to the project.

If Mr Anselmo does succeed in bringing down the regulatory walls, consumers are likely to benefit, with increased competition bringing down prices of international long-distance calls.

Karen Zagor

Rain check: a credit card payphone in use at an airport

Profile: KINNEVIK

A David and Goliath battle

KINNEVIK is waging a David-and-Goliath struggle against Sweden's national telecommunications agency, Televerket, in trying to capture a large share of telecommunication services in the Nordic country. The fight is ranging from mobile telephone networks to satellite and land-based systems.

But the battle to deregulate services has placed increased financial pressure on Kinnevik at a time when other competitors are entering the Swedish telecommunications market.

Kinnevik was an investment group with industrial holdings when it decided in 1981 to enter telecommunications. It established Comvik, which became the only private competitor against Sweden's first national cellular telephone network, the analog NMT-450 system, controlled by Televerket.

Comvik's early hopes of becoming profitable were disappointed. It was awarded only 50 frequencies, which prevented Comvik from expanding as demand grew. Comvik has only 18,000 subscribers compared with the estimated 600,000 subscribers using the NMT-450 system and the newer NMT-900 network.

Comvik has only become profitable recently, according to Anders Bohlin, Kinnevik vice-president. But its experience in competing against NMT did provide a solid foundation for its entry into the new GSM-standard digitial mobile telephone network, he adds. This European-wide system has greater frequency capacity and will not place technical limits on Comvik's expansion as the earlier analog system did.

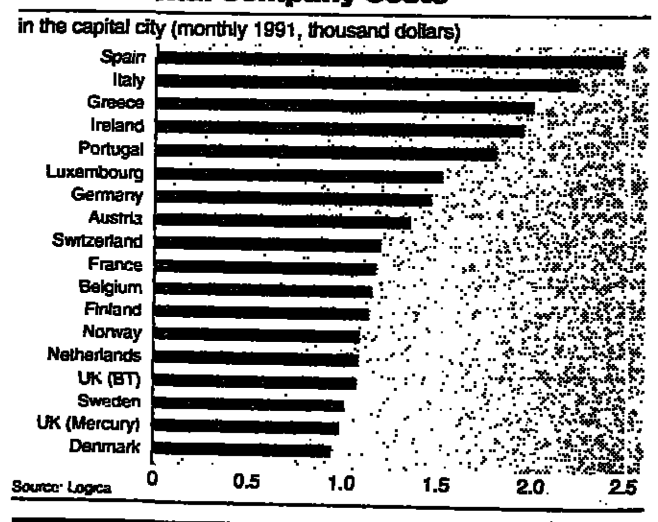
The Comvik GSM subsidiary originally believed it would be the only private operator in the Swedish GSM market, making it Televerket's sole competitor. It predicted it would gain at least a 15 per cent share of GSM sector by 1991.

But last autumn another GSM licence was awarded to

Continued on next page

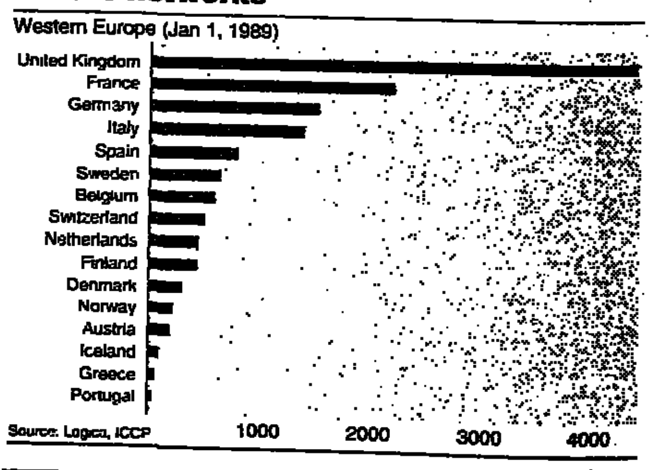
Multinational company costs

in the capital city (monthly 1991, thousand dollars)



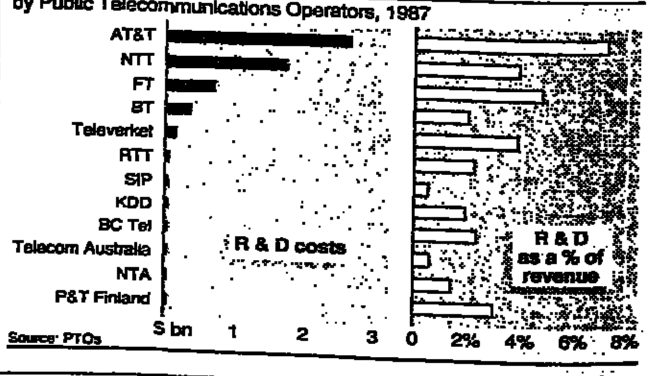
Private networks

Western Europe (Jan 1, 1989)



Research and development

by Public Telecommunications Operators, 1987



WORLD TELECOMMUNICATIONS 5

Continued from previous page
NordicTel, which is owned by a consortium of Swedish companies, including the vehicle group Volvo, the high-technology concern Pharos, the investment company Custodia and the airline SAS. Analysts believe the Swedish GSM market may not be able to support three operators.

Moreover, Comvik GSM faces huge investment costs of SKr1.5bn ($243m) over the next decade compared with the SKr250m Comvik spent in developing its analog network. Comvik GSM recently announced it was seeking a partner in the venture to share the cost. Speculation about a possible partner has focused on Cable & Wireless of the UK, which already owns 40 per cent of another Kinnevik telecommunications venture, Tele2.

Tele2 is an ambitious effort to challenge Televerket in other sectors of the telecommunications market besides mobile telephones. Tele2, which will start this autumn, signed a 25-year agreement to use fibre-optic cable networks that have been laid alongside Sweden's main railway lines.

The new network will be aimed initially at business customers. Services provided will include data communications, domestic and international phone calls, and telefax and video conference links.

Tele2 will also operate private digital networks between corporate offices. Annual investment is expected to amount to SKr100m over the next decade.

Tele2 grew out of Comvik Skyport, which obtained a licence in 1988 to operate satellite-based telecommunications traffic between Sweden and North America. Its customers include Volvo. Comvik Skyport has now been absorbed into Tele2's activities.

Tele2 is aiming to capture between 6 per cent and 8 per cent of the Swedish telecommications market. But predicted sales of SKr1bn by the end of the century will still be insignificant compared with that of Televerket, which had a turnover of SKr31bn in 1990.

Mr David Johannesson, the Kinnevik president, has accused Televerket of blocking Tele2 from extending its service to households. He charges that the state agency is demanding a prohibitively high fee for the rental of the Televerket-owned network connecting private residences. Another Kinnevik subsidiary, 3C Communications, offers a credit card payment system for telephones.

Payphones in the Queen Elizabeth II Conference Centre

Kinnevik also recently merged its foreign mobile telephone company Comvik International with US-based Millicom to form Millicom International Cellular. Both Kinnevik and Millicom are controlled by Mr Jan Stenbeck, the Swedish financier.

MIC claims to be the world's biggest operator of mobile telephone systems in terms of the number of licences with a presence in 15 countries, although most are in the underdeveloped world.

Its activities stretch from Latin America (Chile, Bolivia, Mexico, Costa Rica and Guatemala) to Asia (Sri Lanka, Mauritius, Pakistan and the Philippines).

Tele2 is an effort to challenge Televerket in other sectors of the market besides mobile telephones

These operations are established with local partners and MIC usually has a minority stake.

Millicom last year sold its base of UK cellular subscribers to the Hong Kong group Hutchison for £29.5m.

MIC this summer also sold its 49.5 per cent stake in the Hong Kong mobile telephone service Pacific Link for $150m to First Pacific.

MIC, however, has suffered other setbacks in expanding its European operations.

It lost a bid with other partners for the German mobile telephone licence, which was won by a consortium led by Mannesmann, the diversified steel tubes group. A bid for the Danish franchise also failed.

"We still have a good chance in winning the licence to compete against the Norwegian Televerket in the cellular market there and we are continually searching for other good opportunities," says Mr Bohlin.

Investments in building up its telecommunications empire have placed financial pressure on Kinnevik when it is also embarking on several other costly ventures, including possibly winning the franchise to operate Sweden's first national commercial TV channel.

Mr Stenberg recently announced that half of MIC is for sale. The new shareholder in MIC would gain partial control of the Swedish telecommunications operations since MIC also owns 20 per cent of the GSM network.

Although the sale would raise new capital for Kinnevik, it is also believed to be part of its long-term strategy of returning to the company's original role of being an investment group with key stakes in various ventures.

John Burton

Profile: HUTCHISON TELECOM

Brash youngster is aiming high

IT BEGAN with a meeting between one of Asia's richest tycoons and a Canadian entrepreneur who could not even afford a suit. Six years later it is one of the most important new players in mobile telecommunications.

Hutchison Telecom, a subsidiary of Mr Li Ka-shing's Hutchison Whampoa conglomerate, was founded in 1985 under the guidance of Mr Rick Siemens. Mr Siemens, a one-time piano salesman, convinced Mr Li that telecommunications would become a rapid growth industry as Hong Kong deregulated its domestic mobile telecommunications and data services in the mid-1980s.

With Mr Li supplying the finance, the company moved aggressively into the Hong Kong paging and cellular phone markets and quickly dominated them. Success was due to intensive marketing – compared to the more conservative approach of the colony's monopoly wireline supplier Hongkong Telecom – and the vision that mobile communications satisfied Hong Kong's twin crazes for doing business and acquiring status symbols.

It then entered Australia, Thailand, Taiwan and the UK. In July the UK subsidiary Hutchison Telecom (UK) completed a string of acquisitions when it bought Microtel Communications, a Personal Communications Network (PCN) licence holder, from British Aerospace. In return, British Aerospace became a 30 per cent shareholder in Hutchison Telecom (UK).

These are just the opening glimpses of Mr Siemens's global ambitions. By the end of the decade he wants to be in 20-30 countries in Asia and Europe, offering a full range of mobile services from radiopaging to PCN and digital cellular phones.

The company has just announced its entry into the German cellular phone market by taking a majority shareholding in ABC Telekom. This is the latest step towards fulfilling Hutchison Telecom's catchline of offering "global personal communications", so "people are able to communicate with each other wherever and whenever they want".

Depending on each market, Hutchison Telecom will either go in alone or look for local partners "who think like we do", Mr Siemens said. He does not mind being a minority shareholder in some countries, but Mr Siemens believes all consortia need one driving partner to be a success.

Back in Hong Kong, Hutchison Telecom is seen as brash yet obviously successful. It approaches telecommunications from a marketing angle and relies on service and customer satisfaction. "Once we get a customer, we keep him," Mr Siemens said.

Hutchison Telecom operates five customer service centres in Hong Kong which handle cellular phone customers' problems seven days a week. The Hong Kong paging service employs 2,000 operators to deal with its 300,000 subscribers. Employing this many operators obviously increases the cost of the service, but the company boasts that calls are usually answered in one second and people in Asia prefer talking to people rather than machines.

Mr Siemens, who comes from a business rather than a technical background, stresses the need for technology to be "transparent". Businessmen should not have to read a manual before using telecommunications equipment. The company does no research and development but it passes on feedback from customers to its suppliers like Motorola to improve product design and features.

The company moved aggressively into the Hong Kong paging and cellular phone markets and quickly dominated them

The company's management style and structure are very different to those found in telecommunications monopolies. Hutchison Telecom has no formal training programme. "Most people are on their own training paths," according to Betsy Chang, group communications manager.

Rick Siemens, Hutchison's managing director: "Once we get a customer, we keep him"

Business development is overseen by a six-man team, mainly educated in the US, but with backgrounds including oil exploration and computers as well as telecommunications. Other executives have more colourful pasts, including one who was an Australian Rules footballer.

A Hutchison subscriber outside the Hongkong Bank

With the exception of liberalised markets like the UK, the main barrier to development is government reluctance to expose their telecommunications monopolies to new competition.

However, Hutchison Telecom says it enhances rather than pre-empts existing wireline services. It also claims to be sensitive to local market conditions.

The company has established paging operations in Thailand and Malaysia. But Asia will be slower to invite competition than Europe. As one pointer to potential pitfalls, the Malaysian government earlier this year refused to allow satellite broadcasting, thereby frustrating the hopes of Hutchison Telecom's sister company Hutchvision of broadcasting to Malaysia on the AsiaSat 1 satellite.

Ms Chang said Hutchison Telecom will concentrate on Europe first, but hopes Asia will start deregulating. "We are poised for it when Asia does start to open up."

Not everyone is convinced by Mr Siemens's ambitions. The Hong Kong stock market has marked down shares in Hutchison Whampoa this year because Hutchison Telecom's investment plans are so large. The company is committed to spending about £800m (US$1.4bn) on PCN alone as it develops the system in the UK. Other plans, such as the launch of Telepoint in the UK later this year, are also viewed with scepticism given the lukewarm reaction to earlier Telepoint launches.

But Hutchison Telecom brushes off the criticisms. It says it will transplant its concepts of service and management, developed in Hong Kong, to the UK. It also claims to be unfazed by news that Mercury Personal Communications and Unitel, the other licence holders for PCN, are to co-operate in the building and operation of a PCN network. "Maybe linking up will save them money, but maybe it will mean more management headaches," Ms Chang said.

Angus Foster

Regulation has failed to keep pace with technological change

Science outruns watchdogs

INCREASING liberalisation is forcing changes to the regulatory framework of the world telecommunications industry.

It took 150 years for telecommunications to progress from the telegraph and the telephone to the dozen or so services available by the early 1980s. But in the past decade, technological advances have led to explosive growth and the multiplication of services.

Telephone companies have found it particularly difficult to cope with these developments. Traditional divisions have become obsolete: between voice, data and video, between public and private, between wireless and wireline, and between national and international services. At the same time, the ability to bypass the public network has introduced additional competitive pressures.

The policy debate is no longer only about monopoly versus competition, but about who shall have market access, to what degree and under what rules.

Unfortunately regulation has failed to keep pace with technological change, not only in the most restrictive but also in the most liberal regimes. At national, regional and international levels, the industry is struggling with structural reform.

Nevertheless, some trends have become apparent: the traditional view of telecommunications as a natural monopoly has been found to be unsustainable; liberalisation has brought competition; policy-making has been increasingly separated from the operating function, where they were once both handled by the national telecommunications administrations.

Specific measures have included deregulation of the supply of equipment to subscribers, an opening of national procurement policies, liberalisation of value added services, encouragement of competition in mobile telephony and satellite services, and, in some markets, competition in basic networks and long-distance services. Also under consideration in some markets is local competition via cable television or radio access.

There are parallel moves towards privatising national telephone companies in some countries, opening closed markets to investors.

However, the rate of change can be overstated. Even those value-added service or mobile communication markets opened to competition are heavily regulated.

More intractable problems have to be addressed, for example tariff reform, and revision of the monopoly on voice communications – which accounts for more than 90 per cent of

The industry is struggling with structural reform

the revenues and often 100 per cent of the profits of the telephone operators. Controls on foreign ownership persist in many countries.

Regulation has proved to be a moving target once the decision to liberalise has been taken. In most cases, governments have found they must re-regulate to prevent the dominant carrier abusing its monopoly.

This involves guidance on rebalancing tariff structures and optional tariff packages, as well as the level of price cap regulation.

Above all, it relates to the issue of interconnectionwhich embraces equal access to the dominant carrier's network, access charges, allocation of numbers, quality of service and performance.

Interconnection has become significant in determining the success of competitive networks in the UK, US and Japan. Increasingly, it will lay the foundation for competition policy during the 1990s.

But if the more conservative countries are holding back, pressure for reform is building elsewhere.

The European Commission has passed tough guidelines intended to curtail restrictive practices by dominant suppliers. Radical change could come as early as the second half of next year when the Commission decides whether to abolish the voice telephony and network infrastructure monopolies of member states – a trend already being helped by the liberalisation of mobile and satellite communications.

In some states, developments are in advance of the 1992 review. In the UK, the process of abolishing the BT and Mercury duopoly has created perhaps the most liberal regime in the world.

In Germany the need to upgrade infrastructure for the eastern part has relaxed the voice monopoly on two-way satellite communications, while a second mobile cellular operator has been given permission to build its own national microwave network. A study by the German monopolies commission has recommended licensing long-distance competitors to Deutsche Bundespost Telekom, citing German Railways and utility companies as potential competitors.

Meanwhile, Australia, New Zealand and Sweden have joined the US, UK and Japan in introducing liberalisation.

In Japan, the Ministry of Posts and Telecommunications has started a long-term restructuring of Nippon Telegraph and Telephone along business lines, while increasing mobile and satellite competition.

In the US, deregulation and the break-up of AT&T in the early 1980s were instrumental in inspiring competition outside North America. Progress has continued with the lifting this year of restrictions on the regional Bell operating companies in providing information services, as well as a review of AT&T's dominant carrier status.

The US Federal Communications Commission has also pushed for reform of international accounting rates. This is the system used by telephone companies to share revenue on international calls, and is believed to penalise countries where competition and market opening have generated most growth in telecommunications usage.

The logical next step will be to obtain permission for global carriers to offer subscriber-to-subscriber service across frontiers to meet the needs of global customers – a development that will be facilitated by the opening of the international market for resale of capacity, most likely first between the UK and US.

One issue outstanding on the regulatory agenda is revision of the International Telecommunications Satellite Organisation (IntelSat) charter to allow competition from entrants such as Orion and PanAmSat.

Further ahead, liberalisation, privatisation, and promotion of competition by regulatory bodies can be expected to increase. Both developed and developing countries will probably continue to reject total monopolies. Those countries that fail to move with the times will miss out on the telecommunications revolution.

In fact, that revolution may have only just begun. In contrast to today's network architectures – which do not lend themselves to competition, and where problems have been experienced in interconnecting competing operators – each of the new fibre-optic, radio access and software-based intelligent network technologies has the potential to be configured for competition at an early stage.

In the absence of a definitive or stable regulatory model, this could mean greater dismantling of monopoly structures and arrangements by the end of the 1990s, a shift from regulation to full-blown competition.

Denis Gilhooly

CommunicationsWeek International

Profile: OFTEL

A difficult balancing act

SIR Bryan Carsberg and his staff at the UK's Office of Telecommunications (Oftel) are often asked by their foreign counterparts about their experience as regulators. The UK was the first country in Europe to introduce competition in telecommunications, and Oftel has already dealt with several of the competitive issues that other countries are only now beginning to tackle.

But while Oftel has come to terms with many of the problems faced by regulators, its work is far from over. While Sir Bryan could answer questions from overseas regulators about the setting of the BT price cap, or the setting up of a rival BT, he would be hard pushed to answer some of the fundamental questions about regulation. For example, does regulation get easier over time, and how long it will take for market forces to take over the work of the regulator?

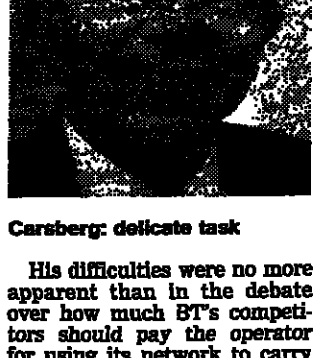
Surprisingly, recent months have demonstrated that regulation becomes more complicated over time, and there is no early prospect of the market taking over from Oftel.

The days when Oftel's only significant task was to establish a series of interconnection agreements between Mercury and BT have gone. This summer, Oftel and the Department of Trade and Industry put the finishing touches to a review of the UK telecommunications sector, and opened the doors to newcomers. The next few years will see cable television companies, satellite operators, personal communications network (PCN) operators and new local and long-distance operators – as well as Mercury – knocking on Sir Bryan's door to ask for a fair deal with BT.

If this prospect alone is not daunting enough, Sir Bryan will be expected to assist with prime minister Mr John Major's Citizen's Charter, which aims to bring a fair deal and compensation to the consumer. Finally, in case Oftel thought it was getting away lightly, it will be expected to vet requests to the DTI for licences to build and operate telephone networks.

If it were simply a question of making the market attractive enough to persuade new companies to enter the market, Oftel's work would be straightforward. But the interests of new companies are directly opposed to those of BT. If BT were still a state-owned monopoly, Oftel and the DTI could impose their will; but BT is a private company whose management has a duty to its shareholders to get a good deal from the regulator. BT would not think twice about taking legal action against the regulator if it thought it had something to gain.

All this leaves Sir Bryan with a delicate balancing act. The duopoly review allowed him to carry out his preferred policy of paving the way for new operators, but the threat of a reference to the Monopolies and Mergers Commission by BT prevented him from moving the goalposts too far.



Carsberg: delicate task

His difficulties were no more apparent than in the debate over how much BT's competitors should pay the operator for using its network to carry part of their calls, and to what extent they should contribute to BT's loss-making exchange line installation and revenue business. BT's price cap prevents it charging an economic price for these services, so the operator believes that other companies which use this part of its network should help share the burden.

In reaching his decision to start forcing operators to contribute, but only after they become established in the market, Sir Bryan made two U-turns, had a public row with BT chief executive, Sir Iain Vallance and, in the eyes of many, lost much of his hard-won respect.

Perhaps the most important outcome, however, is that his decision invests even more power and responsibility with an already overburdened regulator. The duopoly review began as an attempt by Oftel to write a rule book for operators. But regulatory issues will become so complicated when the new players arrive that Oftel has decided to keep its discretionary powers. The white paper, *Competition and Choice. Telecommunications Policy for the 1990s* is more of a guide than a rule book.

Oftel may also be anxious to maintain its discretionary powers as a means of helping it to create the type of telecommunications market that it would like to emerge. This would be one in which competition and economies of scale have a role to play in providing the best deal to the user. Oftel wants to maintain its right to intervene in the market at all times and ensure that this balance is maintained.

Sir Bryan still talks of a day when a regulator will no longer be necessary. But Oftel's most recent decisions have given it more, rather than less responsibility. The overriding reason why Oftel has chosen to maintain such a firm hand is because BT still has 95 per cent of the UK market, makes enormous profits and will maintain its dominance unless Oftel keeps a close eye on it. BT, for its part, will do all it can to protect its market share, and ironically, therefore, preserve the need for strict regulation.

Mark Newman

Profile: EUROPEAN COMMISSION

Intervention is the slogan

IN FOUR years the European Commission has transformed the legislative landscape of the region's telecommunications.

Resolutions, proposals and directives covering simple terminal approvals to the rules governing competition in data services have issued fast and furious from Brussels. The task facing the Eurocrats is to convert the promise of a prosperous, unified and liberal market into reality.

EC interest in the telecommunications sector stems from the recognition of a direct relationship between the development of telecommunications and the growth of overall economic activity. The Commission estimates that, directly or indirectly, over six European jobs out of 10 already depend on information and communication technology.

Along with related information technology, telecommunications is also big business in its own right. It is calculated that telecommunications alone could generate up to 7 per cent of regional GDP by the end of the present decade.

In line with this, Community telecommunications policy has had three goals – the promotion of an advanced European telecommunications infrastructure, the stimulation of a homogeneous region-wide market for services and equipment, and the encouragement of greater competitiveness among European industry.

Furthering these aims has not been easy. Europe is a fragmented telecommunications market with different, and often incompatible, national regulatory traditions, supplier relationships and equipment standards.

The EC has also had to overcome the resistance to change of PTTs and governments reluctant to surrender sovereignty. In spite of the obstacles, progress has been made.

A key document for EC telecommunications strategy was the Green Paper published in mid-1987. This had two main thrusts – liberalisation of the terminal equipment sector and the partial opening up of the more valuable telecommunications services business. In parallel the EC began to develop a new code of rules for Open Network Provision (ONP). This was intended to define the conditions under which the basic public network could be opened to rival private service providers.

Articulation of the Green Paper proposals has been fairly brisk. Among the main milestones was the issuing of a directive liberalising the region's \$3.5bn regional terminal market in May 1988, and the conclusion of a deal on services and ONP between the Commission and the member states in 1989.

Among other things, the compromise agreement sanctioned the full and rapid introduction of competition for all value-added services, including electronic mail and database access, and the re-sale of basic data communication services from January 1, 1993. However, it also allowed the possibility of extending data monopolies to the beginning of 1996 for member states with undeveloped public data networks.

Other important achievements were the adoption of the Ecu55m (\$64m) programme known as Research and Development in Advanced Communications in Europe (RACE) in 1987, the establishment of the European Telecommunications Standards Institute in April 1988, and agreements on unified terminal approvals and public procurement in 1990.

The terminal-approval deal should mean that equipment approved and certified in one member state is valid for use in all 12. The public procurement initiative is designed to progressively extend bidding rights to suppliers from any member state on national telecommunications contracts valued at Ecu600,000 and above.

Inevitably, there have been compromises, revisions and delays in the EC agenda. At various times the Commission has initiated proceedings against member states for non-compliance with its directives, and a number of countries have legally challenged the EC's use of Article 90 of the Treaty of Rome, an instrument which enables the Commission to issue directives without requiring the normal processes of consultation.

There has also been failure, notably in achieving the original timetable for ISDN implementation and, more recently, getting manufacturers and operators to agree on the means of introducing high definition television.

More serious is the feeling that, in spite of all the EC initiatives, the realities of the market place are not that much different from those of the early 1980s.

Part of the problem is that many would-be new players are disinclined to engage in expensive legal challenges to the established operators for non-compliance with EC directives. "We haven't had the equivalent of an MCI which launched a crusade against A T & T in the US," says Hugh Small, a director of the Arthur D. Little consultancy.

Another difficulty is that some of the Commission's powers of enforcement in the sector were untested. In this connection, a recent European Court judgement that the EC's use of Article 90 was legitimate has wide implications. The particular dispute concerned the enforcement of the 1988 terminal directive, but the precedent is significant for services too.

In the original services directive, competition in voice and telex services, and in the provision of the basic network, was left to the discretion of the individual member states. However, the directive also included a commitment by the Commission to re-examine all reserved services in 1992.

Some observers believe that an assault on basic voice service – which still constitutes nearly 90 per cent of the total market, and is worth around \$84bn in annual revenue – is inevitable. The inference is that the court's judgement in the terminal dispute effectively signals the end of legal action to halt the EC programme.

Meanwhile, the Commission is planning to add flesh to the skeleton of some of its framework directives. In particular, it is looking to beef up the ONP initiative.

Intervention may well be the Commission's watchword for the 1990s. Having decided to tell the PTTs how to behave, it must now supply rules of conduct for present circumstances and future eventualities.

John Williamson

International editor, Telephony Magazine

Profile: FEDERAL COMMUNICATIONS COMMISSION

Overhaul of US system looms

MR ALFRED Sikes, chairman of the US Federal Communications Commission, is a man with a mission: he wants to maintain US leadership of the increasingly tough world telecommunications industry by encouraging competition and innovation, and thoroughly overhauling the US regulatory system.

"I am working", he says, "towards reducing entry barriers, towards incentives to be efficient and invest in innovation, towards international competitiveness and towards the elimination of outdated rules that have handicapped individuals in the industry."

Since taking over as FCC chairman in 1989, Mr Sikes has pushed through a series of initiatives, including fundamental changes to the telecommunications pricing regime. Plans in the pipeline include re-allocating frequencies on the broadcast spectrum to help innovatory technologies in areas such as mobile telephony.

However, while the FCC is the dominant body in the day-to-day regulation of the industry, especially in the field of long-distance pricing, it is only one of three significant bodies with a say in the structural evolution of the sector. The framework will be extremely important over the coming decade as the US decides between an array of emergent and competing communications technologies.

The framework will also be largely decided by Congress and by the courts, notably Judge Harold Greene, who presided over the 1984 break-up of American Telephone & Telegraph (AT & T). That created seven "Baby Bell" regional telephone companies with local monopolies, partly controlled by state regulators, while leaving AT & T in the long-distance market facing substantial competition from rival companies. The results have included a sharp fall in long-distance prices and much greater consumer choice.

The role of the FCC has changed over the years. It used to be a relatively sleepy backwater of the US administration, empowered by the 1934 *Communications Act* to oversee interstate telecommunications – essentially, making sure AT & T and others did not abuse local monopolies.

However, in the 1970s, the FCC, driven by technological change, began to take a more much aggressive – albeit uneven – approach to fostering competition. That, in turn, created the climate which pro-

The FCC used to be a sleepy backwater of the administration

duced the anti-trust action leading to the break-up of AT & T (though at the time, the FCC opposed the creation of the 'Baby Bells').

The rush of technological change means that the FCC finds itself at the centre of some of the most important industrial decisions facing the US as it heads into the "information age" - including the contest between wireline and wireless technologies, the search for an American High Definition Television standard, and the looming competition between technologies and industries to transmit video images into the home.

Mr Sikes came to the job with a clear framework for action already worked out. As head of the National Telecommunications and Information Administration, he developed a blueprint for future policy, called Telecom 2000, which has proved a touchstone for his initiatives since then. These include:

- A reform of the price regulation system in the local telephone market away from the traditional "rate of return" system, which created a disincentive for companies to invest in new technology which might boost their profits over the allowable level. Under the new "incentive" regulation, or price caps system, they have a powerful reason to be much more efficient, since if they exceed a stated productivity level they can make bigger profits.
- In the long distance market, the FCC approved in August proposals to give AT & T more pricing flexibility to meet the needs of major business users, although it kept its price cap structure for services that appear rather less competitive, such as international and operator services.

AT & T's continuing, though declining, domination of the long-distance market (it retains more than 60 per cent of the business) has meant that it has remained subject to substantial regulatory controls. This presents the FCC with the delicate balancing act of fostering competition from new entrants, while restraining the immense muscle of the largest player in the field.

The commission has also acted to speed up the deployment of new computer switching systems and to reduce the barriers to full competition in the fast-growing market for 800 "toll-free" services.

- In the international market, the FCC has become a leading proponent of pricing reforms. Mr Sikes says that accounting rates – the negotiated payments between international carriers, under which US companies pay foreign counterparts for delivering calls to final destination – are too high, asare the international calling charges in many foreign countries.

He told a meeting of US telecommunications companies in August that the FCC believed it had the legal authority to disapprove unreasonable accounting rate agreements and it was prepared to begin doing so in 1993.

- The FCC is trying to free up space on the radio spectrum for new technologies, such as Personal Communications Networks and digital audio broadcasting, and in changing the way in which space is allocated to give greater incentives to pioneering, innovative entrepreneurs.

Another major role facing the body will be to oversee the Baby Bells as they flex their muscles beyond their local monopolies. Under the AT & T break-up, the seven companies were barred from the long-distance market, equipment manufacture and information services. However, Judge Greene recently, and with great reluctance, paved the way for them to enter the information services area, while Congress is considering legislation that would allow them into the equipment business.

Other industrial groups are strongly opposed to these developments, on the grounds that the Baby Bells will use their local wireline monopoly profits to squeeze competition in the new areas. Mr Sikes, who has supported the new freedoms for the Bell companies, disagrees. He argues that the Baby Bells, aware of the potential force of the anti-trust action, have a vested interest in maintaining competition, while the FCC has the analytical strengths to spot cross subsidies. "It is my view", he says, "that in general the safeguards needed for the Bell operating companies entering this new area (information services) are in place and are being effectively executed here at the FCC."

At the same time, he sees one of the challenges still facing him as being the reduction of distortions in both the long-distance and local markets which misallocate costs, skew prices and stretch out depreciation unrealistically.

Martin Dickson

Profile: JAPAN'S MINISTRY

The genies of privatisation

THE GUIDING spirits for the not-so-quiet revolution in Japan's telecommunications industry live in a dull, squarish building in Tokyo's Kasumigaseki district that houses the Ministry of Posts and Telecommunications, headed by the minister, Katsutsugu Sekiya.

To be sure, pressure from the US government and complaints from telephone users have played a role. Yet in the end it is bureaucrats toiling in offices stuffed with old desks and file cabinets, piled high with reports and papers in Kasumigaseki, who have made competition, and all the benefits this has brought, a reality for Japanese consumers.

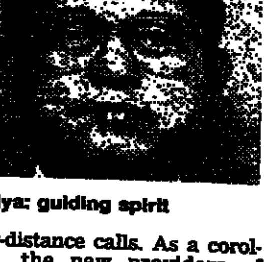
The checklist of achievements is impressive: Nippon Telephone and Telegraph (NTT), the former telecommunications monopoly, has been partially privatised, and its monopoly over key services steadily eroded since 1985. The total number of companies providing telecommunications services has grown from 85 in 1985 to 1,033 by the end of June. The cost of a call between Tokyo and Osaka has halved; leased circuits for the same area are two-thirds cheaper.

International phone charges to the US have fallen by 56 per cent; leased lines by 58 per cent. All the while, the diversity of services and variety of equipment have rocketed. The heavy hand of monopoly, it appears, has gone. "We believe that competition has been very successful," says Mr Eiichi Tanaka, director of telephone charge policy at the ministry.

Few would disagree. While deregulation is an accurate description, at times the monitoring and shaping of the new competitive regime have required intensive and continuing involvement of the ministry, whose job is really only half done. Japan has no independent regulator. The ministry, for example, must give its approval to all proposals to cut or adjust telephone rates.

The government still owns two-thirds of NTT. It approves board appointments, and it passes judgment on every decision of significance affecting the company, from capital spending plans to internal restructuring, apparently with little consideration for NTT's shareholders who have fared badly since it was partially privatised in 1987. The ministry has taken a cautious, gradualist approach – pushing forward in the cause of competition, while not taking risks that service could be adversely affected.

Several important issues remain to be resolved. In principle, the ministry wants to eliminate cross-subsidies among NTT's various services. It is believed, and argued by NTT, for example, that local phone services operate at a loss, which is subsidised by



Sekiya: guiding spirit

long-distance calls. As a corollary, the new providers of long-distance service may have had something of a free ride – making a profit by undercutting NTT prices, while not having to support a local network.

Some analysts argue that connection charges to NTT's local network are too low. The ministry, however, is unconvinced. A breakdown of operating costs, according to ministry-agreed rules, shows that an NTT deficit in local services fell from Y13.8bn (\$102m) in 1989 to a relatively insignificant Y3.2bn in fiscal 1990 (to March 30, 1991). Profits from long-distance calls were Y954.3bn.

Mr Tanaka, however, suspects that the deficit for local service could well be caused by NTT's inefficiency. "NTT has 260,000 employees. We doubt whether NTT needs so many people," he says. The ministry has set up a study committee to determine whether NTT is efficient. If not, NTT will not see an increase in local charges.

Put on the back burner until a 1995 review is a decision on whether to break up NTT into regional companies. In the interim, NTT is being forced to restructure internally by establishing regional service companies that will continue to be owned 100 per cent by the parent company.

"Yardstick competition" is to be introduced to bring pressure for improved performance. Eventually, NTT could be forced into complete, or partial, divestment of regional operating companies. NTT, predictably, opposes such moves on the grounds that its research capability would be weakened, the integrity of the network would be lost, and that local charges would be forced up.

Other issues on which the ministry is continuing to grind away include: improvement of interconnection facilities for independent carriers, and dissemination of information on interconnection, including user identification codes. NTT is to be prevented from abusing information which it obtains about other carriers' business activities, while it will be obliged to disclose more business information, including traffic data.

Steven Butler

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Mobile communications continues to be one of the fastest-growing sectors of the world market as well as one of the most profitable

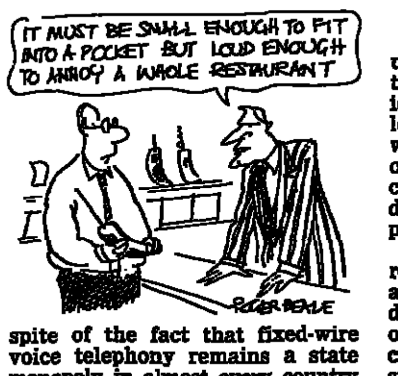
A vehicle for introduction of competition

MOBILE communications continues to be one of the fastest-growing sectors of the world telecommunications market – as well as one of the most profitable. Almost all segments of the mobile market are continuing to expand at a rapid rate. Advances in technology, the introduction of competition and access to economies of scale are bringing down the price of customer terminal and infrastructural equipment. According to some forecasts, one in 10 of the European population will be using some kind of mobile service by 1996.

It is expected that most consumers in wealthy countries will be able to afford mobile telephones by the end of the decade – by which time mobile systems could for the first time be reaching a mass market and providing genuine competition to traditional fixed-wire networks.

The potential of mobile communications has encouraged many governments to use it as a vehicle to introduced competition into their telecommunications markets, which until recently have been the monopoly of state-owned operators.

In Europe, for example, most governments have now licensed private groups to operate cellular telephone networks – particularly for the new second-generation digital networks which started going into service this year – in spite of the fact that fixed-wire voice telephony remains a state monopoly in almost every country apart from the UK.



The European Commission is attempting to encourage this process through a Green Paper on mobile communications. But the paper has been delayed because of some member states' concerns about the wider implications, and it is not now expected to appear before the end of 1991.

While the US and Japan are expected to follow Europe in the introduction of digital cellular – with services starting in the US this year and in Japan in 1992 – increasing attention is being paid to the development of third-generation systems.

These are expected finally to usher in the long-heralded era of the universal mobile telecommunications system (UMTS), offering low-cost personal communicators which can be used at home, at work or in public places and which combine the functions of present-day cellular, cordless and radio-paging services.

Government and industry representatives from Japan, Europe and the US met in Tokyo in July to discuss the prospects for agreement on common standards and frequency allocations for third-generation systems, which are expected to be introduced in about 2005.

Such an agreement would open up enormous possibilities for cost-savings – in contrast to first-generation and second-generation systems, where the world market has in each case split into different blocs using incompatible standards.

But the US appears less keen than the others on the concept of common standards. This would make it difficult for Europe and Japan to fix third-generation frequencies at next February's World Administrative Radio Conference (Warc) in Spain, which will concentrate on allocating frequencies for mobile services for the 21st Century.

In the meantime, plans for a less-advanced satellite-based global mobile communications system have been drawn up by Motorola, the US manufacturer.

The group's $2bn Iridium project, which is intended to go into service in 1996, involves the launch of 77 low-orbit satellites which would provide service to small mobile terminals all over the world.

The first satellites would be launched in 1992. However, the events of the last year have demonstrated that the generally healthy outlook for mobile communications does not mean that all services will automatically succeed, or that previous growth rates will be maintained.

The worldwide market for cellular communications has experienced falling growth rates.

This has largely been due to a slowdown in the leading cellular markets – particularly the UK, where the number of subscribers actually fell for the first time last April.

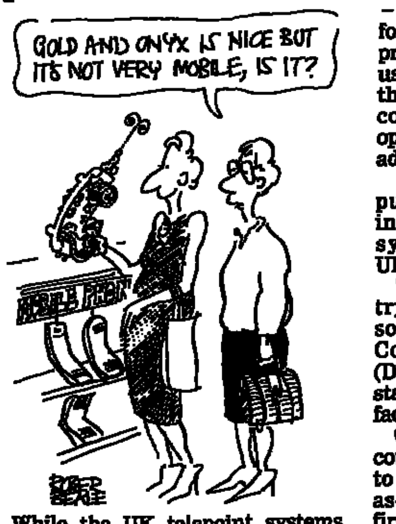
The slowdown has been one of the factors behind the slower-than-expected introduction of the pan-European digital cellular system, which was launched this year.

It has also contributed to the uncertainty in the UK about the prospects for personal communications networks (PCNs), the high-frequency digital cellular services due to be launched in 1992/93 with the aim of reaching a mass market. In a bewildering flurry of activity this summer, many of the original participants in the UK's three PCN operators pulled out.

One of the other factors that has unsettled the PCN operators has been the miserable performance of another mobile service in which the UK is acting as pioneer – telepoint. This service – which allows users of digital cordless telephones to make calls (but not to receive them) at public bases attached to the national telephone network – was first launched in the UK more than two years ago, but has attracted fewer than 10,000 subscribers.

Of the four consortia originally licensed to operate the service at the beginning of 1989, only one was still running a network by the middle of this year.

Two others had ceased operations and the fourth had yet to start. Total losses are thought to amount to about £100m.



While the UK telepoint systems are inherently limited, being unable in their present form to receive incoming calls, many observers believe that take-up would have been much better if the implementation of the system had been handled differently.

They point out that the operators launched their services before they had enough base stations in place to offer adequate coverage.

Moreover, they tried to persuade people to buy the relatively expensive handsets just to use telepoint, without waiting for the launch of other products – including personal base stations for home cordless use, and cordless private branch exchanges for office use – which would have allowed the creation of a pool of digital cordless users to whom the operators could sell telepoint as an additional service.

Several other countries are now pushing ahead with plans to introduce their own telepoint systems using the same UK-developed CT2 technology.

The European Commission is trying to promote the more sophisticated Digital European Cordless Telecommunications (Dect) system as an alternative standard in Europe, but appears to face an uphill struggle.

Operators which are already committed to CT2 will be reluctant to convert their networks to an as-yet-unproven technology. The first Dect products will not start to appear on the market until late next year. This technology is instead expected to play a significant role in the European market for cordless office products.

Neil McCartney

Editor of Mobile Communications and Telecom Markets, the FT newsletters

Expansion rate slows down

THE use of cellular communications is continuing to grow rapidly throughout the world, but there are signs that the rate of expansion is slowing down.

Between September 1989 and November 1990 the number of subscribers around the world grew from 5.3m to 10.4m, an increase of 96 per cent in 14 months, according to Mobile Communications, the FT newsletter. But the rate of addition of new subscribers fell in the following seven months. Between November 1990 and June 1991 the total rose only to 12.7m – up 22 per cent.

The figures have been hit by the recession in the most-developed markets – the US, the UK, Canada and Scandinavia. The downturn, expected to be temporary, has come just as many of these countries are launching second-generation digital cellular networks, intended to overcome capacity problems of analogue cellular systems.

While these older markets still represent the bulk of the world cellular population, the fastest growth is now taking place elsewhere, in south-east Asia and Latin America, where subscribers are using cellular as an alternative to the fixed network, which is unreliable and frequently unavailable.

Cellular communications

The same pattern is likely to emerge in the eastern European countries, where cellular offers the best short-term solution to the problems caused by 45 years of under-investment in the basic telecommunications infrastructure.

The first eastern European systems went into service in Hungary in November 1990 and Estonia in January 1991. Cellular licences have also been awarded by Poland, Czechoslovakia and the USSR. Many of these systems involve US companies.

In the US, which accounts for roughly half of the world's cellular population, the number of subscribers is expected to grow this year from 5.3m to 7.1m. In absolute terms this is the same rate of growth as last year – an extra 1.8m subscribers.

But in relative terms it represents a fall in the annual growth rate from 51 per cent to 34 per cent. This reflects a rise in the level of "churn", the rate at which subscribers disconnect from the system, and in the level of bad debt. The annual revenue generated per subscriber is also expected to be lower this year.

In the UK, the world's second biggest market, the slowdown has been even more marked, with growth levels dropping to less than one third of those experienced two years ago.

The UK market, which had 507,000 subscribers at the end of 1988, grew by 353,000 in 1989, only to see the number of new connections drop to 279,500 in 1990. And, in the first half of this year only 56,500 subscribers were added. Cellnet, the smaller of the UK's two operators, recorded a 39 per cent fall in profit in the year to March 1991.

As in the US, the UK market has been hit by rising churn – which averaged 20 per cent last year – lower usage and bad debt.

But the results have been worse, partly because of the depth of the recession but also because of the structure of the UK industry, where Cellnet and its rival operator Racal-Vodafone are obliged by law to sell services through third-party companies known as service providers, which get a share of subscriber revenue and have typically been paid a commission of about £200 by the operators for each new customer.

In their anxiety to attract business, these companies have done deals with independent dealers to bring in subscribers at perhaps £300 each. The effect of this structure has been to inflict an immediate cash drain on the service providers and to encourage the dealers to drive down telephone prices to well below cost levels – since the bonus ensures that they still make money on each sale.

Dealers have thus signed up many customers that are either unwilling or unable to pay their quarterly bills. As a result, in the past year many service providers have either pulled out of the business or gone bankrupt.

The UK's one-time position as Europe's fastest-growing market has now been taken over by Italy, where the number of subscribers grew from 140,000 to 434,000 in the 11 months between August 1990 and July 1991, an increase of 210 per cent.

Many European countries are now moving into the next stage of cellular development with the opening of their branches of the pan-European digital cellular telephone network (GSM). These networks will operate to a single set of common standards, unlike the present analogue networks which largely use incompatible national standards. As a result it will eventually be possible for a GSM subscriber to use his telephone virtually anywhere in Europe. At the same time, equipment prices should fall, since manufacturers will be able to produce for a single European market. However, the signs are that GSM networks will develop more slowly than had been expected.

In the US – where there are two operators for each area, the local telephone company and an outside competitor – a debate is still raging over which is the best digital technology to use to replace the present Amps analogue standard.

In 1989 the Cellular Telephone Industry Association (CTIA) decided to use a technique known as time division multiple access (TDMA), similar to that adopted for the digital standard in Europe, rather than the frequency division multiple access (FDMA) method which is used in analogue systems.

But many US manufacturers and operators are now backing a new and relatively untried option, code division multiple access (CDMA) which they claim makes more efficient use of spectrum – a key issue in the US, where several large cities are projected to run out of spectrum by the end of next year. Qualcomm, the company which first proposed CDMA, claims it will provide 10 to 20 times more capacity per unit spectrum than the Amps systems.

Digital systems are also due to be introduced in Japan, where there are about 1m analogue cellular subscribers, shared between the national carrier NTT and two regional competitors, IDO and DDI. NTT is planning to launch digital service in Tokyo by the autumn of next year and in Osaka and other big cities by 1993, using TDMA technology.

Two new consortia licensed this summer – which include a number of western companies, such as Motorola and Pacific Telesis of the US, and BT and Cable and Wireless of the UK – will also launch digital systems using the same standard.

Neil McCartney

Timely call: a Motorola handset in use near Big Ben

European cellular-telephone subscribers (July 1, 1991)

Country	System	Launch	Subscribers	Penetration[1]
Andorra	NMT-450	Jul 1990	189[2]	4.02
Austria	NMT-450	Nov 1984	64,104	12.16
Austria	TACS-900	Jul 1990	28,342	–
Belgium	NMT-450	Apr 1987	45,204	4.56
Cyprus	NMT-450	Dec 1988	3,929	5.16
Denmark	NMT-450	Jan 1982	52,183	31.48
Denmark	NMT-900	Dec 1986	109,661	–
Faroe Islands	NMT-450	Jan 1989	1,222	26.00
Finland	NMT-450	Mar 1982	144,734	52.73
Finland	NMT-900	Dec 1986	117,325	–
France	RC 2000	Nov 1985	259,523	5.90
France	SFR NMT-450[3]	Aug 1989	72,500[2]	–
Germany	C-450	Sep 1985	369,985	4.74
Hungary	NMT-450	Oct 1990	4,600[2]	1.31
Iceland	NMT-450	Jul 1986	10,896	21.79
Ireland	TACS-900	Dec 1985	27,200	7.64
Italy	RTMS	Sep 1985	87,707	7.53
Italy	TACS-900	Apr 1990	346,142	–
Luxembourg	NMT-450	Jun 1985	767	1.53
Malta	ETACS	Jul 1990	1,707[2]	4.27
Netherlands	NMT-450	Jan 1985	29,600	6.76
Netherlands	NMT-900	Jan 1989	71,200	–
Norway	NMT-450	Nov 1981	145,805	52.09
Norway	NMT-900	Dec 1986	72,968	–
Portugal	C-450	Jan 1989	9,705	0.93
Spain	NMT-450	Jun 1982	61,903	2.00
Spain	TACS-900	Apr 1990	16,662	–
Sweden	NMT-450	Oct 1981	245,119	64.08
Sweden	Comvik[3]	Aug 1981	21,000	–
Sweden	NMT-900	Dec 1986	278,593	–
Switzerland	NMT-900	Sep 1987	150,767	22.84
UK	Rac-Vod TACS-900[3]	Jan 1985	671,500[2]	20.87
UK	Cellnet TACS-900[3]	Jan 1985	524,500[2]	–
Total			4,047,241	10.75

1 Per 1,000 of population; 2 Estimates, 3 Systems operated by private companies

Source: Mobile Communications

Bleeper image fades

THE worldwide market for radio-paging services is continuing to expand rapidly as paging gradually shakes off its traditional role as a one-way "bleeping" service.

Increasingly, the trend is towards the use of pagers which offer alphanumeric or numeric display services – and can handle considerable amounts of information – rather than the older tone-only or tone/voice models.

In the US, tone and tone/voice pagers accounted for 40 per cent of the 9m pagers in use by the end of last year, according to a report by Frost and Sullivan.

But their share is expected to drop to 20 per cent by the end of 1994, by which time the total market will have expanded to 12m.

The proportion accounted for by alphanumeric pagers is expected to rise from 3.7 per cent to 11 per cent over the same period. In Europe, alphanumeric pagers now account for between 30 per cent and 40 per cent of sales.

The trend is being driven partly by the development of low-cost pagers. Today's alphanumeric display pager can be produced for about the same cost as the simple tone-only bleeper of 10 years ago.

At the same time, pagers and paging networks have become more sophisticated, and operators have become more creative in their service offerings.

To an extent, these developments are being forced on operators by threat of competition from other mobile services – principally cellular telephones, but in future also cordless telephone and telepoint services.

This is most noticeable in Europe where public paging services had more subscribers than cellular until about the end of 1988, but now have only just over half as many, reflecting the slowdown in paging growth.

The total of public paging subscribers in Europe, which stood at 1,410,000 at the end of 1988, grew by 377,000 in 1989 but by only 308,000 in 1990, according to Mobile Communications, the FT newsletter. And in the first half of this year Europe's public paging operators added only another 122,000.

The UK market, which increased in size from 575,000 to 660,000 in 1989, has shown virtually no growth since then, standing at 670,000 in the middle of 1991. However, this overall figure masks internal changes: British Telecom, which is by far the dominant operator but has a very large number of tone-only customers, has lost share to its six national rivals, which place a much stronger emphasis on more sophisticated services.

European radio-paging subscribers[1]

Country	Subscribers	Penetration[2]
Austria	81,500[3]	10.72
Belgium	119,362	12.05
Denmark	48,304[3]	9.40
Finland	40,558	8.16
France	257,363	4.58
Germany	305,172	3.91
Iceland	3,421[3]	6.48
Ireland	12,472	3.50
Italy	97,274	1.69
Luxembourg	4,090	8.18
Netherlands	293,000	19.66
Norway	82,560	19.66
Portugal	11,044	1.05
Spain	80,000[4]	2.04
Sweden	128,747	15.15
Switzerland	39,266	5.95
UK	670,000	11.69
Total	2,217,470	6.05

1 June 1, 1991; 2 Per 1,000 of population; 3 Estimates; 4 Spanish total is calculated from the four main operators – Mensatel, Buscperson, Telemensaje and CIC

Source: Mobile Communications

In spite of the slowdown in Europe, operators remain confident that paging has a place as a useful and sometimes necessary complement to other mobile services – partly because it can offer small and low-cost terminals allied to a low-cost service.

Radio-paging

They argue that there is still a large untapped market for paging in Europe and claim that the total number of users could rise to 12m by the end of the 1990s.

One of the reasons for optimism is that the penetration of paging service in Europe, where there are on average six users for every 1,000 people, remains well below that in many other countries – most notably in the Asia-Pacific region.

In Hong Kong and Singapore, for instance, paging has managed to achieve more than niche market status and there are now more than 11 pagers for every 100 members of the population, according to CIT Research. In Japan, the largest market in the area, there are 4.5m users in a population of 100m.

Roaming between many of these countries and North and South America is increasingly becoming possible thanks to the creation of satellite paging services operating at common frequencies.

The initiative is being driven by Mtel, the company which operates the Skytel nationwide satellite paging network in the US.

Thanks to Mtel's endeavours, the Canadian government has licensed Cantel, the cellular telephone operator, to operate a satellite service at the same 931.9375 MHz frequency as Skytel.

Similarly, the Mexican government has given a licence to a consortium of Mtel and Televisa, and Singapore Telecom will operate a service in Singapore.

Mtel has established roaming agreements with Cantel and Singapore Telecom.

Hong Kong, Malaysia, Brazil and Peru are also licensing operators and Mtel has in addition had talks with several other south-east Asian countries about expanding the service.

But the system is unlikely to reach Europe, which is following its own route to the creation of cross-border services through the launch of the European Commission-backed European Radio Message System (Ermes), a pan-European digital paging service that is due to be launched at the beginning of 1993 using common standards, allowing any subscriber to use a terminal virtually anywhere in Europe.

Unfortunately Ermes has been delayed, like the similarly-conceived pan-European digital (GSM) cellular telephone system, and is likely to take longer to establish than had been hoped.

One of the problems is that the demand for roaming is likely to be smaller than was originally expected, to judge from the performance of Euromessage, a part-digital European service launched last year to cover the main cities of the UK, France, Germany and Italy.

The consortium which runs the UK end is unwilling to give details of traffic but performance appears to have been disappointing, with the result that some operators are recalculating their estimates of the demand for roaming in general.

Whereas the operators were saying in 1989 that five to 10 per cent of Ermes users would require roaming, some now put the figure at only two to three per cent.

The doubts about Ermes have led the UK paging operators to renew their calls for an inexpensive fixed-frequency pager to be developed for the network, as well as for the more sophisticated frequency-agile unit which has already been proposed.

They say that a fixed-frequency pager would provide a cheaper option for potential customers that wish to use the Ermes service but have no need for inter-country roaming – and thus will not need to be able to switch between the 16 different frequencies that the Ermes system will use across Europe.

The UK operators add that a low-cost option is necessary because Ermes will eventually become the most important network for national paging subscribers as well as international roamers because other networks will be phased out.

They argue that frequency-agile pagers will cost between 10 per cent and 100 per cent more than pagers already in use.

Neil McCartney

Great expectations dashed

THIS SUMMER'S flurry of activity among the three UK groups licensed to operate personal communications networks (PCNs) saw one group change hands and the other two agree to set up a common network. It illustrates the degree to which enthusiasm for PCN has waned since the government selected the licensees two years ago.

The sharp slowdown in the UK cellular market, together with the failure of telepoint services to take off, has undermined initial confidence in the likely demand for PCNs. They had been intended to go into service in late 1992 or early 1993, using high-frequency digital cellular technology, with the aim of reaching a mass market for mobile telephony by offering services at prices not far above those for the traditional public switched telephone network.

The growing uncertainty has led to reassessment of initial demand forecasts, which predicted that there would be between 10m and 15m PCN customers by the year 2000, and has made participants think twice about the wisdom of investing the £1bn necessary for the construction of a UK-wide PCN network. Many of the backers of the original three licence-winning consortia – including such leading telecommunications industry names as Motorola and Pacific Telesis of the USA, as well as Deutsche Telekom – have dropped out. The first network may not now open before 1993 and coverage will spread more slowly than had been anticipated.

Most other European countries remain cautious about PCN and are unlikely to launch systems until the second half of the 1990s. By then their digital cellular (GSM) telephone networks, which are now going into service but will develop more slowly than originally expected, will be starting to fill up.

However, Germany is considering PCN as a means of providing telecommunications to the former east Germany.

In the US there is growing interest in PCNs, but there networks are unlikely to go into operation until about 1995. The Federal Communications Commission is considering awarding licences for PCN and by the middle of this year had given experimental permits to 36 companies in 18 different markets to test a range of possible digital technologies. Most of the running is being made by the existing cellular operators, including local telephone companies and by cable television companies. These two groups will be in the strongest position to launch PCN services because they already have networks in place.

The doubts that have afflicted the three PCN operators in the UK – Mercury PCN, Unitel and Microtel – reflect the growing realisation that, initially at least, PCN services will not be very different, in terms of features or price, from the digital cellular services on offer from the existing operators, Cellnet and Racal-Vodafone.

The technology used by the PCN operators will be essentially the same as that developed for GSM, albeit operating at the higher frequencies around 2 GHz (where there is more spare capacity) rather than the 900 MHz to be used by GSM.

But the cost of building a PCN network will be roughly twice as much, since the use of high-frequency signals with a relatively short range means that more transmitters will need to be installed to cover the same area.

So the PCN operators are unlikely to be able to offer very cheap rates, at least in the first few years. While PCN prices will be below those for GSM, they are likely to be well above normal fixed-line telephony rates.

Similarly, it could take some time for equipment prices to come down to the £100 to £200 levels originally predicted. The advantage of using small cells is that handsets can operate at lower power levels and can thus, in theory, be made smaller and cheaper. But without a mass market manufacturers will not be able to produce handsets in the volumes required to being prices down.

This means that in the initial period the PCN operators will have to address the same business-user market as the cellular companies.

The goal of creating a consumer market, and providing genuine competition to British Telecom's virtual monopoly of local networks, has been postponed until near the end of the 1990s.

Personal communications

The growing perception that PCN was a riskier investment than had been thought led to abortive merger talks between Microtel and Unitel at the end of 1990.

After the failure of these negotiations, Deutsche Telekom decided in the spring of this year that it would not take up its 15 per cent stake in Unitel. As a result it became equally-owned by Thorn EMI of the UK, Northern Telecom of Canada and US West.

At about the same time, Pacific Telesis, Matra and Millicom of the USA decided to pull out of Microtel, leaving it totally controlled by British Aerospace.

In July, BAe sold Microtel to Hutchison Telecommunications (UK), a subsidiary of the Hong Kong based Hutchison Whampoa, in exchange for a 30 per cent stake in the company's UK subsidiary.

Eight days later Cable and Wireless took sole control of Mercury PCN by buying out the 40 per cent stake held by Motorola – the 30 per cent it had held from the start, plus the 10 per cent which was never taken up by Telefonica.

Simultaneously, Mercury PCN and Unitel revealed that they were going to build a single shared network, rather than two separate ones, in a move that it is expected to save each of them about £400m, or 40 per cent of their expected investment costs. It is anticipated that the joint network will provide coverage for 80 per cent of the population by 1994, almost double the coverage that would have been achieved by each operator acting alone.

Meanwhile, Vodafone is planning to meet the challenge from PCN by opening its own personal communications service in the first half of 1993, and extending it to all urban and suburban areas by the end of 1995.

The service, involving the installation of 3,000 micro-cells to meet higher capacity requirements, will run on the back of the GSM network that Vodafone plans to open next year, and will operate at the same 900 MHz frequencies. Subscribers to this micro-cellular network (MCN) will be able to use a basic low-powered handset wherever Vodafone has installed a micro-cellular infrastructure.

Subscription and call charges for the MCN will be set 20 per cent below those of Vodafone's existing analogue cellular network – which has a connection fee of £50, a monthly subscription charge of £25, and peak-time call charges of 33 pence a minute in London and 25 pence elsewhere (all prices exclude VAT). Vodafone's GSM prices will be set 20 per cent above analogue.

In addition, subscribers will be able to nominate one micro-cell, which in most cases will probably be the cell containing their home, from which it will be possible to make local calls at rates 50 per cent below the current analogue tariff. Similar tiering systems are also likely to be adopted by the PCN operators.

Neil McCartney

Telecommunications equipment manufacturers are adjusting to the new realities of the 1990s

Rich vein of opportunity after the shake-up

Profiles of several equipment manufacturers appear on this page and on pages 12 and 13

AFTER one of the biggest shake-ups in the history of industrial manufacturing, telecommunications equipment suppliers are adjusting to the new realities of the 1990s.

The realignment of resources begun in the mid-1980s has by no means been completed, however. Take-overs and acquisitions have remained significant, placing great pressure on companies that are seen as inefficient in operation or structure.

At the same time, the uncertainties created by new technology and liberalisation in this volatile $120bn sector have, if anything, multiplied in the past few years.

A rich vein of opportunity has opened with the worldwide growth in mobile and satellite communications, but doubts over the migration path for future broadband and intelligent network technologies has sown confusion within the industry.

The market in public network equipment sales was so sluggish a few years ago, that manufacturers have scrambled to exploit the opportunities in eastern Europe, as well as the fall-out from telephone company privatisations in Asia and Latin America, but with no guarantee of early financial returns.

Take-overs and acquisitions have placed great pressure on companies that are seen as inefficient

Meanwhile, the growing business case for diversification of manufacturing companies into the services sector may carry as many risks as rewards.

All the competitive pressures of the old decade have been carried into the new. Moves to open the public procurement markets in the UK, US and Japan, for example, have increased the trend toward multi-sourced switching and transmission equipment in many countries and diminished the reliance of public network operators on their national manufacturing champions.

At the same time, reduced product life cycles and shorter home production runs have forced suppliers to look for growth in international sales. By the mid-1980s, as switching systems in particular became progressively dominated by software, with its high development costs, the need to increase market share had become critical.

The resulting industry shake-out – exemplified by the watershed merger of the telecommunications interests of Alcatel and ITT in 1987, but followed by other agreements between Siemens and GPT, and AT&T and Italtel – saw a reduction in the number of European manufacturers from more than a dozen at the beginning of the decade to only a handful now.

Today the industry is experiencing a similar adjustment in the transmission business. The acquisition of STC by Northern Telecom and purchase of Telettra and a division of Rockwell International by Alcatel, for example, are intended to give both companies the size to compete in the market for next-generation optical transmission systems.

The success of these and other alliances is by no means guaranteed. Past failures have included joint ventures between AT&T and Philips Telecommunications, Italtel and Telettra, Thorn EMI and Ericsson, and GEC and Plessey.

Both the task of digesting the multiple systems inherited by merger and acquisition, and of selecting which system to introduce in individual markets, is likely to be one of the main challenges for the industry over the decade.

Whether this concentration within the switching and transmission industry will ultimately be to the detriment of remaining medium-sized players or new market entrants such as Bosch, Nokia, Philips or Matra is not yet clear.

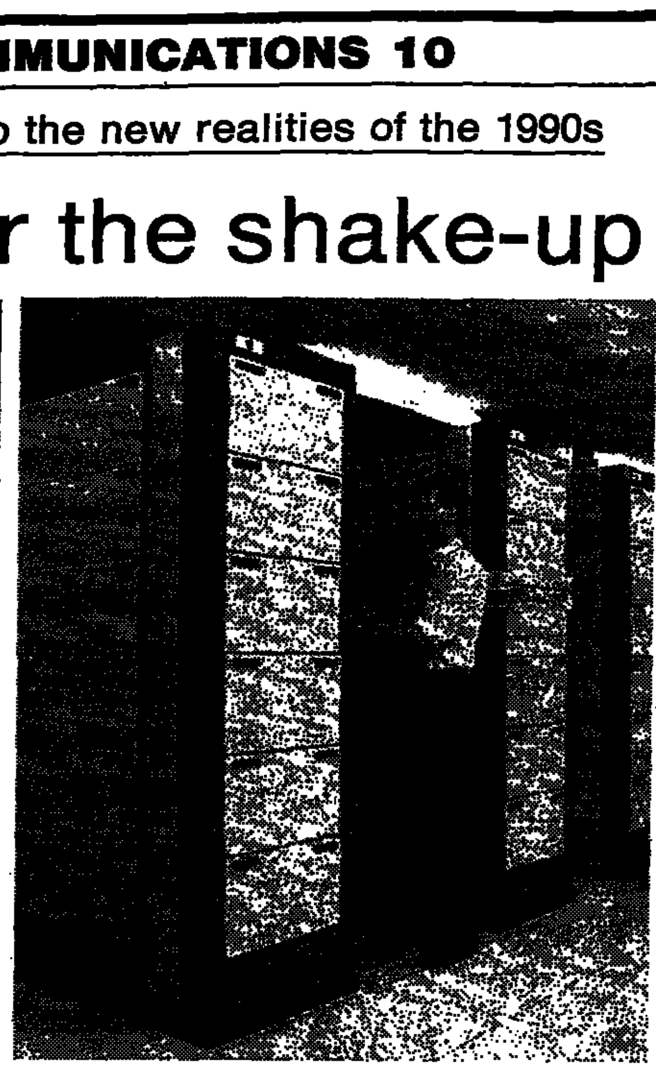
For their part, each of the leading players is attempting to maintain coverage of the whole manufacturing sector with a variety of umbrella concepts ranging from AT&T's Net 2000 to Siemens' Vision One. But it is increasingly difficult to differentiate between these concepts. The smaller players are banking on high-quality niche market strategies.

By contrast, some equipment manufacturers have also decided to enter the services business to maintain growth and profitability. Motorola, in particular, has attempted to enter personal communications networks and mobile satellite service operations, to date with mixed success.

The risk this strategy carries of alienating the manufacturers' own customers, namely the public network operators, will also have to be faced in the future by those players who own large internal networks. As regulatory restrictions are lifted this could provide the platform to operate the private networks of other companies. Overall, this trend may point to the long-term disparity of interests between operators and manufacturers.

One of the biggest bonuses for manufacturers in recent years, however, has been the arrival of mobile communications as a mass market, a market that was extremely difficult to predict.

March of progress: a telephone exchange circa 1900 . . .



. . . a modern exchange is completely automatic

Growth markets: Philips handset in use on a building site . . .

. . . a rigger at work on an aerial at Goonhilly Earth Station

In Europe, an interesting development has been the strategic use of standards and spectrum management in the deployment of the new pan-European digital cellular radio system, or GSM.

Arguably a defensive measure aimed at safeguarding suppliers within the European Community, the intricacy of the GSM specification has meant that only those firms with highly customised research and development capabilities, such as Ericsson and Motorola, have been able to enter the market from outside.

As in the area of facsimile, the modular design and flexible manufacturing techniques employed by Japanese companies is likely to give them a competitive edge in the supply of mobile terminals for GSM and other mobile systems. An increasing trend is the growing international presence of Japanese manufacturers which had previously been *domestic* suppliers – NEC, Fujitsu, Hitachi, Matsushita Communications, Mitsubishi Electric, Oki, Sony, Toshiba.

One of the biggest bonuses for manufacturers has been mobile communications

New opportunities from the coming liberalisation of the satellite communications market will similarly reap few benefits for European manufacturers, with the mass market for so-called very small aperture terminals (VSAT) already dominated by US and Japanese suppliers.

Market uncertainty in telecommunications manufacture is compounded today by doubts over where technology is heading.

Technological convergence in the electronics sector has failed to occur to any great extent. The markets for telecommunications and data processing continue to have their own nuances.

Although manufacturers such as AT&T (with its acquisition of NCR) Fujitsu (with ICL), NEC (with Bull), and Siemens (with Nixdorf) have continued to improved their positions in computers, they have not yet had the same success in communications.

The failure of the integrated services digital network (ISDN), a marriage of voice, data and video communications, has cast further doubt on the convergence concept.

The huge R&D expenditure squandered on ISDN has made manufacturers more circumspect in the drive towards the next generation of high-speed broadband communications networks. Progress here is already being hampered by a lack of consensus on the appropriate path to the advanced optical fibre networks of tomorrow.

Perhaps the biggest uncertainty, however, hangs over the future of the intelligent network (IN) and of personal communications networks (PCN).

By centralising intelligence in databases across the network, the IN holds the promise to crack the software bottleneck that has delayed the introduction of many new services. The IN also promises a graceful solution to the growing commonality between mobile communications and public networks.

The paradox of the IN and PCN is that they require product development and system development that only the largest players can afford, yet software problem-solving and last minute marketing that only the smaller entrepreneurial or computer companies can provide. Though each has so far been reluctant to cede control of the own area of expertise, in time this paradox is likely to lead to a much higher concentration of links between telecommunications, computer and software suppliers.

Denis Gilhooly

CommunicationsWeek International

Profile: AT&T

An adjustment to global competition

Since AT&T sold its overseas telephone manufacturing operations to ITT in 1925, the company has had its attention focused mainly on the US market. It was cushioned from domestic competition by regulations that allowed it to dominate its home market.

Partly as a legacy of this, the company has made a slow start in global competition. Since the Bell System was split up on January 1, 1984, AT&T has had to adjust to the challenge increasing global competition.

Manufacturing remains a vital part of its operations. It inherited essentially all of Ma Bell's manufacturing operations, including telephones, switches, cables, integrated circuits and computers. It also inherited the prestigious Bell Laboratories research centre, which gave the world, among other things, the transistor and the laser.

In the US, the company is still protected from competition with the Bells on the manufacturing front, although this may soon change. The Senate passed a bill this year to give the so-called Baby Bells manufacturing rights, but final passage of the legislation is by no means guaranteed.

If a similar bill is passed by the House of Representatives, the two will need to be reconciled before being signed by the president; and there is widespread belief that the present administration is opposed to the legislation.

If the Baby Bells are allowed to enter manufacturing, it will have a substantial impact on AT&T. "The Baby Bells are the largest cohesive segment of the US consumer market, with about 75 per cent.

"If they were to develop the capability in manufacturing it will impact on AT&T," said Victor Krueger, vice-president of Dataquest.

According to Mr Krueger, AT&T's greatest manufacturing strength lies in its central office switching business. "I would say it was their flag ship area."

Central-office switching is used almost exclusively by telephone companies for their internal networks. Richard McGinn, a senior vice-president of AT&T Network Systems, said that about 95 per cent of switching equipment world-wide went to telephone companies or PTTs. The remaining 5 per cent is sold to large multinational companies, such as Boeing.

Central-office switching can be extremely lucrative, with high price-tags for initial installation.

Keeping systems up to date by upgrading or retro-fitting older lines is also a considerable money-spinner.

Mr Krueger estimates that the world-wide market for central-office switching is worth about $8bn, of which AT&T commands about $1.6bn, or half the US market.

To keep ahead of its competitors, AT&T spends heavily on research and development. According to Mr McGinn, of the $3.5bn that the company spends annually on research and development, switching and transmission accounts for about 65 per cent.

Mr Krueger believes the company's greatest manufacturing weakness lies in its international fibre-optic business, "which to date has been lacklustre. But AT&T is in this business for the long-term."

"For a company that has been, for years, the supplier to a captive market, AT&T has had to reposition itself to compete on a global basis. The company has generally improved its responsiveness and has made the transition fairly well, but it is an on-going concern," he said.

AT&T suffered a number of setbacks in Europe in the early 1980s, and received a further blow when plans to buy a French equipment-maker fell through. However, its recent alliance with Italtel should be profitable, particularly as Italy is in the midst of modernisation.

AT&T's recent acquisition of NCR, the computer-maker, is expected to help its long-term manufacturing capability. Computer technology is involved in almost all areas of telecommunications equipment.

For example, Mr McGinn said that NCR's System 3000 would help telecommunications companies to replace front-office functions, such as billing.

NCR's contribution to R&D is also expected to filter through to the telecommunications manufacturing end of the business. NCR spent about $500m on R&D this year.

Indeed, the computer age has already had an impact on AT&T's manufacturing operations as a whole. "The distance between the factory and the customer is getting very small," said Mr McGinn, "and there is a growing notion of the factory as a service organisation.

"Customers now have direct input into factory work, because, with the new technology, their participation is necessary for customisation work on a site-by-site, customer-by-customer basis."

Where engineers once worked in an insular environment, they now work directly with customers.

AT&T is also expanding its global network of factories. In addition to its manufacturing presence in the US, it now has factories in the Netherlands, Spain, Taiwan and Korea; and this will probably expand.

Karen Zagor

Section 2

In Section 2 of this survey, FT writers investigate the globalisation strategies of leading telephone companies. In addition, progress in telecommunications is examined across the world

Bernard Simon on the mixed fortunes of Canada's suppliers

Northern Telecom rings the changes

CANADA'S three most prominent telephone-equipment makers are in upheaval, but each for a different reason.

Northern Telecom, the big supplier of computerised switching and transmission equipment, is positioning itself for an aggressive thrust into markets outside North America.

In a bid to focus attention on global marketing, Northern has made a series of new management appointments and has undergone an internal restructuring. Its international ambitions took a step forward last March with the £1.3bn ($2.2bn) acquisition of Britain's STC. The addition of STC, which has been integrated into Northern's European operations, will increase revenues from outside North America from a mere 6 per cent in 1990 to about 20 per cent.

Mitel has moved to limit the damage by cutting its workforce by 15 per cent, and making other changes to tighten operations

The mood at the other two Canadian telecom equipment suppliers, Ottawa-based Mitel and Novatel Communications of Calgary, is much less expansive.

Mitel, which specialises in small and mid-sized office switchboards, is struggling under the twin clouds of a mediocre financial performance and efforts by its controlling shareholder, British Telecom (now BT), to sell its 51 per cent stake. Although BT decided to retreat from equipment manufacturing as long ago as March 1990, it has yet to find a buyer for its shares.

The only certainty is that, when BT does sell, it will take a big loss on its C$320m ($280.7m) investment. It bought its interest in Mitel in 1986 for C$8 a share; towards the end of August this year, Mitel was trading at C$1.20 a share after reporting losses for five consecutive quarters.

Mitel's chief executive, Mr Anthony Griffiths, acknowledges that BT's decision to put its controlling interest up for sale "became a distraction for management" at a time when the company was facing ferocious competition, especially in North America.

Mitel has moved to limit the damage by cutting its workforce by 15 per cent, closing a facility in Florida and making other changes to tighten its operations.

At the same time, it has purchased one of its key US distributors and is exploring joint ventures and alliances. A new range of desktop devices is due to be launched this autumn, and Mr Griffiths hopes that the company could be back in the black by early 1992.

Troubles at Novatel, one of North America's leading cellular telephone manufacturers, surfaced last year when it revealed that a projected 1990 profit would turn out to be a large loss, which was finally reported at C$204m.

A growing slice of Northern's products is likely to be sourced from outside North America, especially the Far East

That setback was especially embarrassing as it coincided with a privatisation share-issue by Novatel's parent, Telus Corp (formerly Alberta Government Telephones). Novatel's rosy projections had been included in the prospectus for the Telus share offering.

The fall-out began almost immediately. German electrical group Robert Bosch pulled out of a deal to buy an equity stake in Novatel which would have created a global marketing alliance. Novatel's senior management was replaced.

To reassure investors, Telus exercised an option to sell Novatel back to the Alberta government. The government has also given Novatel a sizeable loan guarantee. But Telus continues to run the company under a management contract, as it tries to regain momentum.

Of the three Canadian equipment suppliers, Northern is clearly making the most progress. It has succeeded in breaking into a number of new markets. It gained its first order last summer for an intelligent network from the German Bundespost. Northern has also been awarded contracts for cellular equipment in five out of eight regions of Mexico. Thanks to STC's contribution, BT is now Northern's second biggest customer after Bell Canada.

Dr Paul Stern, who took over as CEO in early 1989, has swept a wide broom through Northern. Several North American factories are being closed to eliminate duplication between production in the US and Canada. A growing slice of Northern's products is likely to be sourced in future from outside North America, especially the Far East. Dr Stern predicts that by further squeezing costs, gross margins could climb by up to five percentage points over the next few years.

The corporate structure was shaken up last February. Responsibility for research, manufacturing and engineering has been transferred from the regional managers to three new global product groups, each with its own president reporting to Dr Stern. The three groups cover public networks (cable, switching and transmission), private networks (office systems) and cellular and radio products. Northern arrived late in the cellular business, and is working hard to catch up. Four geographic units, with responsibility for the US, Canada, Europe and the Far East, now handle marketing.

By further squeezing costs, gross margins could climb by up to five percentage points over the next few years

The changes are designed, says Dr Stern, to encourage "truly global thinking". Analysts caution, however, that it is still too early to judge whether Northern will succeed in becoming a force in the top league of the international industry.

WORLD TELECOMMUNICATIONS SERVICES MARKET – TOP 10[1]

Company	Country	1990 turnover ($bn)
NTT	Japan	44.2
AT&T	US	25.1
DBTelekom	Germany	24.8
BT	UK	24.3
France Télécom	France	21.1
BellSouth	US	14.3
SIP	Italy	14.0
Nynex	US	13.6
GTE	US	12.8
Bell Atlantic	US	12.3
World market turnover		320

1 Top 10 = 64 per cent of the world market

Source: IDATE Industrial Analyses, Montpellier (France

Profile: ERICSSON

Important breakthrough into Germany

ERICSSON, the Swedish telecommunications equipment company, is not going to be diverted – at least not for the time being – from the financing of its long-term development programme by what it hopes will turn out to be a short-lived recession in its global markets.

Lars Ramqvist, the forceful chief executive, is adamant that there is not going to be any drastic cutback in its overall spending strategy, although the company may have to trim the proportion it spends on research and development costs relative to net sales, which looks like being more than 18 per cent this year.

This year more than SKr10bn ($1.6bn) is being allocated by Ericsson to its technological investment programme and although the figure is likely to be lower in 1992 it will not be substantially so.

Mr Ramqvist argues that the company has no real choice but to stick firmly by its broad objectives laid down in Ericsson's five-year rolling programme.

"We are forced to spend more than our main competitors because unlike them we have no strong home market or state support to help us through a recession. Ericsson has to stand out in the face of the open winds. We have to be more aggressive on the cost side than most of the others," he explains.

The cost burdens for Ericsson in remaining technologically competitive are considerable. The investment required by the company for the adaptation of its phone switching systems is expensive because they must comply with the different standards of specification required by the United States, Japan and western Europe. "We are the only company that has had to meet all three of them at the same time," Mr Ramqvist points out.

'We are forced to spend more than our main competitors because unlike them we have no strong home market'

"It has meant the organisation of three separate research teams to carry through the necessary work.

"However, we are on schedule, even perhaps a little ahead," he claims. The new commercial digital cellular system designed to comply with new US technical standards will be ready by the end of the year, a month ahead of the competition.

In fact, there is a good deal for Mr Ramqvist to be pleased about at the moment. It is true that the company's pre-tax profits fell in the second quarter of this year by 37 per cent to SKr766m from SKr1.21bn but Ericsson still enjoyed the second best half-year results in its history with a profit of SKr1.77bn. The decline in profits can be accounted for by the increase during the six months of SKr1.145bn in the size of technological development costs.

"We are in a strong position," insists Mr Ramqvist.

WORLD TELECOMMUNICATIONS EQUIPMENT MARKET – TOP 10[1]

Company	Country	1990 turnover ($bn)
AT&T	US	12.2
Alcatel[2]	France	12.0
Siemens	Germany	8.6
Ericsson	Sweden	7.5
NEC	Japan	7.4
Northern Telecom[3]	Canada	6.8
Motorola	US	3.6
GTE	US	3.4
Bosch	Germany	3.3
Fujitsu	Japan	3.0
World market turnover		93

1 Top 10 = 73 per cent of the world market. 2 Telettra not yet included. 3 STC not yet included
Source: IDATE Industrial Analyses, Montpellier (France

"The company has delivered important orders on time." He points proudly to the honouring of the DM350m ($201m) contract made in May 1990 in alliance with the German company Siemens for provision of the new GSM digital mobile cellular system to Mannesmann Mobilfunk of Dusseldorf. This represented an important breakthrough for the company into the lucrative German telecommunications market.

On July 12 came the inauguration of the replacement system installed by Ericsson in New York and New Jersey for Metro One, the mobile telephone operator. "This constituted the world's largest replacement system to date," says Mr Ramqvist.

Some eyebrows were raised by a 20 per cent drop in Ericsson's order book during the first half of the year to SKr21.55bn which compared with SKr26.82bn for the same period of 1990 but Mr Ramqvist is confident that there will be an upturn in orders during the next six months. He points out that the decline in confirmed orders was due to delays in expected contracts like that with Telefonica in Spain.

But new orders are coming in. In August Ericsson secured a SKr250m order from British Telecom through its UK-based engineering and construction company Ericsson Network Engineering to cover the construction of local telecommunications networks in Edinburgh, Bristol and Manchester.

The lack of adequate telecommunication networks in eastern Europe and the former Soviet Union looks like being a serious obstacle to that area's conversion to a free market economy. But Mr Ramqvist is cautious about the potential for Ericsson in the ex-communist countries. It is true that the company has established itself in a leading position in Hungary. The international transit exchange in operation in Budapest is an Ericsson AXE system and the company has supplied the cellular mobile telephone NMT-450 system to the country which will be expanded by the end of this year to an estimated 20,000 subscribers.

The lack of adequate networks in eastern Europe may prove an obstacle to that area's conversion to a free market economy

The company has also established a presence in Estonia, Yugoslavia and Russia. Its acquisition of 35 per cent of the Austrian company Schrack earlier this year in alliance with a group of Austrian banks has brought Ericsson back to what Mr Ramqvist calls "the Habsburg area". It is possible this purchase could turn out to be a starting point for a wider sales offensive in central Europe. But he also expresses concern – like other western company executives – about "how we will get paid for our services" in the ex-communist countries. Until that crucial problem is resolved, it remains hard to see how Ericsson can build up a larger interest in those difficult markets.

Indeed, the company will continue to think and act globally. Ericsson has installed or is meeting an order for an estimated 45m lines of the AXE digital exchange in 81 countries and it is selling transmission equipment to more than 25 countries.

"I have two messages to give on our road shows at the moment," says Mr Ramqvist. "I am sorry about the short-term prospects but our board is 100 per cent behind our strategy. We cannot run this company's business by each quarter's results. We must think and plan long-term."

Robert Taylor

Profile: JANOWSKI

East's antiquated network a lucrative bonus

THE COMPLETE overhaul of eastern Germany's antiquated telephone network has delivered a lucrative bonus to the hundreds of sub-contractors charged with carrying out installation work for the state-owned Telekom authority. Many of these private sector beneficiaries are companies based in western Berlin, who have found it easy simply to extend their operations into the neighbouring east.

Janowski is a small, privately-owned company in Berlin, which has seen business grow by more than 30 per cent in the past year, due to new contracts in the east. The company carries out the practical installation of telephone lines, involving everything from digging up roads to connecting hand-sets. Founded in 1970, Janowski has been a Telekom sub-contractor for 20 years. The company now also carries out installation work for Siemens, another Telekom sub-contractor.

Managing director Jens Gorniak (who set up the business with a partner) is now even contemplating moving the company from its base in a leafy, west Berlin suburb to the east. "Around 50 per cent of our work is now in the east, and there are generous tax breaks for companies settling there," he says. Janowski has taken on 15 new employees in the east, who now make up a third of the total work force. The company has eight offices in the east, from which it carries out nearly 4,000 new line connections a month.

Relations with the Telekom authority are good. Telekom divides up installation work into parcels for which sub-contractors then bid, with the lowest bidder often winning. Alongside established western firms, there are now numerous eastern German companies bidding for Telekom business. A common complaint from western companies is that eastern competitors can put in low bids, because their running costs are lower, due to generous government employment subsidies.

'Around 50 per cent of our work is now in the east'

One western company, the MBM group based in Munich but with offices across Germany, initially stopped bidding for work in the east, as they could not compete with local firms there.

"The competition is certainly fierce, but the eastern firms still lack the technical know-how," says Mr Gorniak.

However, Mr Gorniak believes that the sheer volume of work in the east means that there is enough business to be shared around the private sector. "We are starting from scratch over there," he says. "Our workers have dug up old lines from the 1930s which are worse than useless. Over there, the state, the party, the army, the secret police and the top firms all had their own separate functioning telephone systems. This now has to be unravelled and replaced by a modern integrated network." He is optimistic for the future and believes that in five years' time eastern Germany will have one of the most modern networks in the world.

Telecommunications equipment manufacturers (1987)

	Revenue (US$m)	R&D (US$m)	R&D as % of revenue
AT&T[1]	36,100	2,652	7.3
Alcatel	8,200	800	9.8
Siemens	5,100	650	12.7
NEC	4,100	106	2.6
Northern Telecom	4,800	588	12.2
Ericsson	3,300	300	9.1
Motorola	3,100	270	8.7
GPT	2,300	210	9.1
GTE[1]	1,600	130	8.1
Fujitsu	2,000	251	12.5
Nokia	1,575	80	5.1

1 Including service revenue
Source: PTO reports/Rapports annuels des ETP

In answer to the criticism levelled at Telekom that work in the east is progressing too slowly and hindering investment, Mr Gorniak sides with the authority: "They know what they are doing, and it is just not possible to speed things up." This is not an opinion shared by all sub-contractors. A manager with another firm, who did not wish to be named, believes Telekom is still not moving fast enough. "They have this authoritarian way of doing things. They are in control, and the rest of us just have to fall in line and grab the business we can," he said.

Other big sub-contractors, however, tend to agree with Mr Gorniak's assessment. Klaus-Peter Gatz, managing director of the Berlin subsidiary of the Quante group, says: "We have reached full capacity in Germany now. There simply are not enough installation workers to do the job. These eastern companies coming up now not only lack the technical know-how, but are less efficient. It takes them two to three times longer to do the job."

The Quante group, whose headquarters are in Wuppertal, western Germany, is one of the largest manufacturers of telephone equipment in Germany, as well as a leading installation contractor. Telekom buys most of its telephone boxes and distribution systems from Quante. The company recently set up a sales centre in Leipzig in eastern Germany, but the installation work in the east is still organised from west Berlin and Wuppertal.

Quante has been in western Berlin for 20 years, and now employs 250 people in its manufacturing and installation divisions. Around 70 employees are now working in the east, which accounts for 30 per cent of business. The Berlin subsidiary's turnover in the last year was DM22m ($13m) 18 per cent of which Mr Gatz credits to work in the east.

'We have dug up old lines from the 1930s which are useless.'.

One of the company's biggest contracts is the laying of lines between eastern and western Berlin. "We call this Klondike 2," Mr Gatz jokes. "The whole industry is going through a gold-rush fever." He does not, however, believe that the eastern network will be one of the best in the world. "It's all very provisional. We are laying overhead lines carried on masts, which is something we have not done in the west for years," he says. Mr Gatz believes that in a few years' time one will have to replace the eastern network once again.

For Quante this can only mean more business. "The 18 per cent of turnover from the east last year does not yet include the big contracts we have picked up in recent months. Our business in the east is set to expand dramatically," Mr Gatz says.

Looking to the future, Mr Gorniak says that his company intends also to expand further into the east, and that in a few years' time Janowski will be essentially eastern-based and -orientated. He is now also looking at some of the new eastern companies emerging with a view to buying one of them or going into a joint venture. The opening of the east, he says, was a godsend for Janowski and other small telephone-installation companies which have now been propelled out of their Berlin isolation into lucrative new markets.

Frederick Stüdemann

Profile: NEC

Synergy dictates integration

EXECUTIVES at NEC often say they operate in a single business sector, that of computers and communications, without a clear separation of the two. However, Mr Toshiro Kunihiro, senior executive vice-president, explains that customers seeking computers and communications equipment in an integrated package generate only about one per cent of total sales.

Clearly, computers are still separate from communications. Nevertheless, NEC is striving to integrate computer and microchip businesses with its telecommunications products in order to enhance the value of those products and boost profitability.

"Computers and communications" is the company motto conceived by Mr Koji Kobayashi, former chairman, in the 1970s. While "C & C" is on the right track, Mr Kunihiro, who oversees the communications sector, stresses that the company is considering a new way of doing things.

He explains: "In the telecom field, we have mostly been working on voice-oriented equipment, but personal computers are becoming more important as a means to communicate. In computers, we used to do business based on proprietary products, but open systems are becoming popular. We have roughly 200 member companies under the NEC umbrella, most of which are fully owned units"

"Because NEC has so many scattered independent companies supporting its business across the globe, our management is trying to define more clearly where the parent company and its subsidiaries are going. We need to integrate our technologies, while at the same time decentralising our decision-making process by placing more responsibilities with subsidiaries."

NEC is attempting to move beyond "C & C", which in Japan has a dated connotation. Its "NEC Super 21" programme, running through mid-1992, focuses on formulating an innovative corporate vision. Like IBM, Japan's largest maker of personal computers and communications equipment is groping to redefine its mission.

Hitherto separate divisions have marketed computers, telecommunications equipment and semi-conductors. Until recently the system worked well. Now real integration is required to capitalise on opportunities promising high profitability because data-processing and telecommunications products are on the brink of merging.

Japan's largest maker of communications equipment is groping to redefine its mission

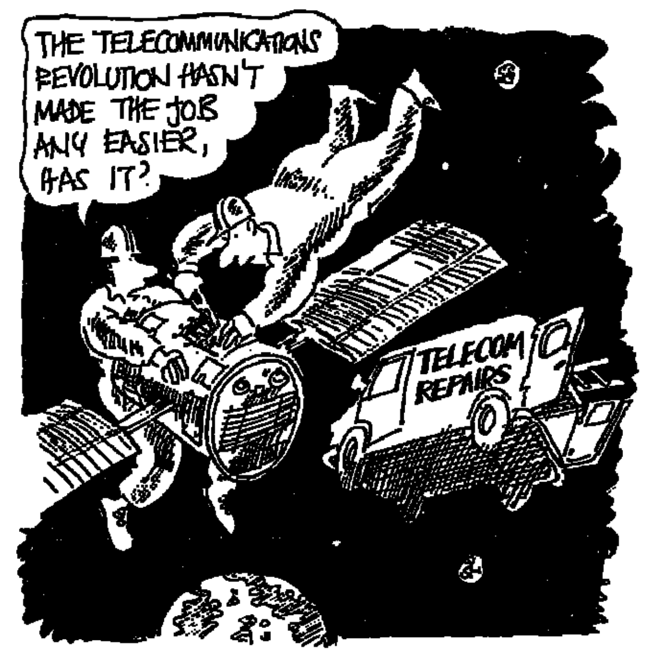
Mr Kunihiro boasts that NEC is the only company in the world's top five with command of the three pillars of commercial high-technology. "In microchips NEC is the number one supplier, in computers it is fourth, and in communications equipment number five," explains Mr Kunihiro adding that NEC's microchip, computer and communications sectors are assisting and giving each other benefits.

To maintain this synergy, NEC will continue boosting its R&D. In the year ended March 31, 1991, NEC raised its research, development and engineering (RD&E) expenditure to Y629bn ($4bn) a 14 per cent increase over the previous year and a level amounting to 17 per cent of sales (R&D is 10 per cent of sales). Mr Kunihiro also says that the company's joint research with Nippon Telegraph and Telephone Corp. (NTT) remains "extremely valuable to NEC."

Communications systems accounted for 28 per cent of the company's sales in the last fiscal year with an annual growth rate of 12 per cent and outpacing consolidated net sales, which increased per cent. Its worldwide sales of communications equipment reached 1,040 bn yen

Japan's leading semiconductor makers, including Toshiba, Fujitsu, Hitachi and NEC, use knowledge acquired in worldwide microchip design systems to further their communications network capabilities.

For the Japanese electronics giant, the Global and Integrated Information System for NEC Semiconductor Group helps the company control microchip production and marketing via hook-ups to production facilities including those in Roseville, California, and Livingston in the U.K. The system allows NEC to understand better the needs of its customers.



One of the main differences in NEC's approach to the communications market inside and outside Japan is the nature of its computer sales. "In Japan we have a very strong installed base of computers, so it is relatively easy for us to obtain more customers for private branch exchanges or PBXs," Mr Kunihiro observes. He is optimistic about collaboration as a means to expand its PBX market, saying: "In the U.S., because NEC does not make and sell IBM-compatible mainframes, our computer customer base is not big".

As for IBM, he observes that it had "difficulties in acquiring telecom" capabilities.

"First, IBM developed its own PBXs, but they didn't sell very well, and later IBM purchased Rolm, but that didn't work so well either. NEC and IBM decided to approach each other, with the goal that by co-operating the two companies' interfaces for PBXs could work together. We had previously arranged such collaboration with IBM Japan Ltd."

NEC is using its Japanese PC market share of around 50 per cent to leverage its way into the value-added network (VAN) sector. In Japan, the company initially had difficulty in generating profits in this field, but subscribers to the PC VAN connected to its data bases now exceed 200,000. With about 4m PCs installed in Japan Mr Kunihiro foresees plenty of room for growth."

In addition to its work with IBM, the Tokyo-based company is co-operating with AT&T of the US.

NEC's senior executive vice-president comments: "We are experiencing good progress in our work together with AT&T's microchip sector and now use AT&T chips in optical transmission equipment as well as cellular phones and base stations." AT&T's design centre and some Bell Labs specialists in Tokyo are helping to design NEC's specifications into their chips.

In the broadband sector, NEC is supplying systems to long-line companies in the U.S. It sees the medical industry as especially promising, because of the need to send images – a capability not so much demanded by the the financial services industry. Teleconferencing is still the sector which Mr Kunihiro regards as the principle area in which the volume of bandwidth-intensive services can be increased.

"The problem is that so far there is no standard in modulating and demodulating the picture, so there is no real connectivity of equipment supplied by different manufacturers," Mr Kunihiro says. In broadband-integrated services digital network (B-ISDN), most of NEC's systems sales are to power utilities like Tokyo Electric Power which use the systems to send computer-aided design (CAD) data.

An up-and-coming area for NEC is radio-transmission-type personal computers

An up-and-coming area for NEC is so-called radio-transmission-type personal computers. Mr Kunihiro recalls: "At first we thought radio-transmission PCs would be bought just like regular PCs. But we immediately found that radio-transmission-type PCs are not commodities. NEC learned it must sell the entire concept and support system."

Another system that should spark greater sales of communications packages is that of "new media" products, including terminals that support video text services. NEC recently set up a division to supervise this market and is focusing on bringing out home-use terminals under about $3,500. Mr Kunihiro acknowledges that new media terminals, and even high-definition televisions (HDTVs) could be slow in coming.

Another tough market is videophones. For NEC, the problem is not so much technical bottlenecks in new media, HDTV, videophones and B-ISDN services. The systems can be manufactured and improved upon.

However, demand is small for these emerging products because customers do not see the value of paying for expensive terminals and monthly service bills, particularly when the software that supports such systems remains primitive.

Any dramatic moves beyond "C&C" necessitate that NEC boosts levels of support software that will add value to the stylish and clever data-processing and transmission gadgets of tomorrow.

Neil W. Davis

Profile: ALCATEL

Focus on core business

"REFOCUSING" is a word frequently on the lips of Josef Cornu, executive vice-president of Alcatel, Europe's biggest telecommunications group.

The strategy was devised in 1986 when the group – merged out of the telecoms interests of privatised French engineering giant CGE, and ITT of the US – began a programme of disposals and acquisitions which in the words of Mr Cornu "sought to refocus Alcatel into telecoms' most dynamic growth areas".

These included a number of key sectors – particularly in public switching and terminal equipment – which had a high level of potential expenditure from national telecoms operators.

With Alcatel strongly linked to the French authorities, forging links with other countries' leading suppliers was a lucrative route to take. More than half the group's sales are derived from governments, or government-owned organisations.

Another driving force has been the increasing amount of software in telecoms equipment which in turn has been reflected in the company's R&D commitments. This has also motivated the company's M&A policy which has sought to link up in areas where its know-how is weakest.

Productivity among the company's 118,000 employees showed an 8 per cent rise last year

"Our policy over the last five years has been to concentrate on our core businesses," says Mr Cornu. "In 1987, 20 per cent of our turnover came from non-core business, but by last year, it had fallen to around 8 per cent, and it will continue to fall as we make further acquisitions in our core areas."

Alcatel abandoned consumer electronics in 1988 when it disposed of its interests in personal computers and television manufacturing. The group now has five business divisions: network systems, which accounts for 37 per cent of sales, cable (28 per cent), business systems (17 per cent), radio, space and defence (10 per cent), and professional electronics (8 per cent).

Initial problems over combining the overlapping interests of ITT and Alcatel – particularly in public switching – have now been largely solved, according to Mr Cornu, while there is "full synergy" in transmission.

The company, which is quoted on the Paris bourse through its parent company, the recently-named Alcatel-Alsthom, has a reputation with analysts as a solid performer. Return on sales has grown steadily from 2.4 per cent in 1987 to 5 per cent in 1990. Net profit rose by 23.7 per cent last year to Ecu591.6m ($698m) on sales of Ecu13.4bn. Operating profit in public network systems leapt 57.5 per cent to Ecu632.2m.

But operating profits in the business systems sector dropped 60 per cent to Ecu40m after fierce competition prompted a round of price cuts.

Productivity among the company's 118,000 employees showed an 8 per cent rise last year on a revenue-per-person basis, but Mr Cornu admits that the company still has savings to make. "We are still setting money aside for restructuring and productivity has to improve further," he says.

Underpinning the company's sales growth has been a series of takeovers and alliances which have concentrated Alcatel's efforts. The deal with Italtel, Italy's biggest producer of telecoms equipment, to develop a 900mhz cellular radio telephone, not only brought the company valuable R&D experience but also gave it better access to Italtel's owners, the Italian government. In satellites, a merger with the French state-owned Aerospatiale produced the world's second largest satellite manufacturer.

This year the company has struck two more spectacular deals. The first, a merger earlier this year with Fiat's telecoms subsidiary Telettra, gave the group a 55 per cent stake in the Italian transmission market and an 80 per cent share in Spain – although the European Commission attached strings to the Spanish part of the deal, ruffling Alcatel's feathers. "It left us with a very bad taste in our mouth", says Mr Cornu.

The second deal was the $625m purchase of Rockwell International's transmission network division which tripled Alcatel's share of the US transmission market to 15 per cent.

Alcatel's eyes are now 'focusing' on the next big prize in European telecoms – digital mobile phones

Forays into the emerging markets, especially eastern Europe, have also bolstered the balance sheet. Last year the group signed a deal with the Soviet Union worth an estimated $2.8bn to supply digital phone lines over the next 20 years.

Joint ventures in Poland, eastern Germany, Hungary and Yugoslavia will take its eastern European turnover to an estimated $250m in 1991.

Alcatel's eyes are now "focusing" on the next big prize in European telecoms – digital mobile phones. Twenty-three countries have agreed a common transmission standard – Groupe Spéciale Mobile (GSM) – which comes into effect later this year. Alcatel has teamed up with Nokia of Finland and AEG of Germany to develop GSM infrastructure for a market which it is forecast will be worth $3bn a year by 1997. With contracts often being awarded on a national basis, Alcatel's network of alliances should hold it in good stead.

Christopher Price

Mark Newman looks at competition in the satellite industry

Battle for the open skies

THINGS ARE hotting up in the satellite market. Competition is beginning to emerge to the three organisations owned by the PTTs – the state-owned operators that control most telecommunications satellites.

The full range of services satellites can offer is becoming available as companies other than the PTTs are allowed to meet users' requirements.

Companies such as Orion and PanamSat of the US and Teleport and British Aerospace in Europe are nibbling at the territory the PTTs have traditionally claimed.

Their goal is an "open skies" policy where satellite operators can compete on equal terms. While this is some way off, important battles are being won and Intelsat, Eutelsat and Inmarsat could soon face a competitive market.

Intelsat is the oldest and largest of the three. It was set up in 1964 and is owned by 119 countries which use it for domestic and international communications requirements. Eutelsat is slightly newer, being set up in 1977 to provide intra-European communications.

It has 28 members. Inmarsat differs by providing maritime and aeronautical rather than just terrestrial services. It was set up in 1979 and has 65 members.

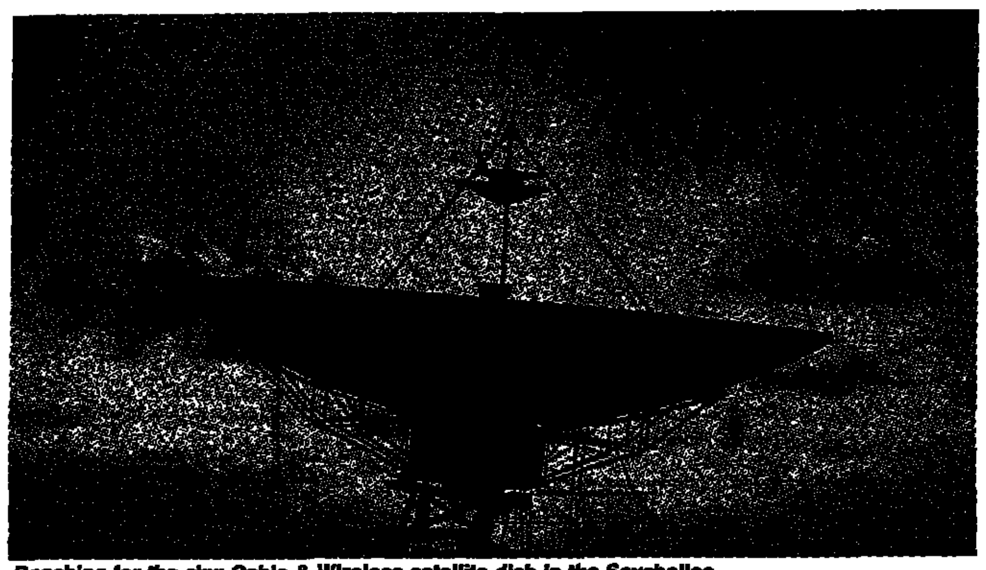
The three organisations, however, are all owned by their users – the PTTs – and any private satellite operator that wants to use their satellite services must apply through their PTT.

PTTs view private satellite operators as their competitors and have not been keen to help them on their way. Few countries allow private satellite operators to compete with the PTTs.

Pressure for liberalisation has come from the US where PanamSat and Orion have been urging the Federal Communications Commission (FCC) to relax the terms under which they are allowed to operate.

But over the last year, attention has turned to Europe and the European Commission's green paper on satellite communications.

The commission believes that there should be competition in both the space segment – the launching and operating of satellites – and the earth segment providing services using these satellites.



Reaching for the sky: Cable & Wireless satellite dish in the Seychelles

The message seems to be getting through as far as the earth segment is concerned. The UK set the pace by licensing seven companies to provide one-way satellite services in 1988.

Germany took matters a stage further last year by licensing companies to provide two-way services, and the UK, France and the rest of Europe will follow the German example over the next one to two years.

But what services will these companies offer, and who will be their customers? The only direct customers of Intelsat and Eutelsat are the PTTs which use the satellite capacity to provide long-distance communication where it is impractical or uneconomical to lay cables. But the satellites are also used for television distribution.

US technology makes it possible for private companies to use satellites to connect their different branches or trading partners.

This market for very small aperture terminals (vsat) has been largely ignored by the Ifs, but companies such as Renault, the French car manufacturer, which has plans for a pan-European vsat network, are forcing competition.

In the old East Germany, where the antiquated telephone network is providing an obstacle to business, satellites are providing an ideal short term solution.

A satellite network connecting businesses in Bonn and Berlin can be put up in days. In the US, vsat networks have been used by some corporations for almost a decade.

Private companies offering satellite services to business customers in Europe have to use the satellites operated by Intelsat and Eutelsat. But the commission's desire for competition in the space segment could mean that they will soon be able to launch and operate their own satellites.

The two organisations are being forced to think hard about how they operate. They are currently beset by cumbersome decision-making processes which will have to quicken if they are to respond to competition. This may mean developing corporate identities to give the organisations a harder commercial orientation.

Inmarsat is not excluded from the threat of competition. In Europe, Euteltracs, a joint venture between Alcatel Qualcomm and Eutelsat, launched a messaging service earlier this year for companies such as long-distance haulage firms that need to keep in touch in remote locations.

The US version of Euteltracs, Omnitracs, has been in operation for some time.

Meanwhile, the American Mobile Satellite Corporation (AMSC) is preparing for what is potentially a much larger project with the launch of three satellites starting in 1994.

Two other companies that might have competed with Inmarsat have gone bankrupt. Geostar in the US and Locstar in Europe had planned to launch satellites and provide mobile satellite services but neither could win financial guarantees because of the high start-up costs and the threat of competition.

There is another cloud on the horizon not just for mobile satellite operators but for telecommunications satellites generally.

Advances in optic fibre technology, enabling thousands of telephone calls to be passed simultaneously along the same line, mean that satellites may not always be the cheapest and most effective means of intercontinental communications.

The world's largest telecommunications operators such as American Telephone and Telegraph, BT, Deutsche Bundespost and Cable and Wireless are moving ahead with plans for laying trans-Atlantic, trans-Siberian and Europe-Asia optic fibres.

They would not be making such plans if they did not think optic fibres were as competitive as satellites.

Profile: INTELSAT

Keen eye on competitors

INTELSAT, the international communications consortium, is one monopoly which keeps a sharp eye on its competition.

The only countries in the world which do not use Intelsat satellites to carry at least a portion of their international telephone traffic are Andorra, Albania and Mongolia – although these latter two hope to join Intelsat.

In addition to the 121 member countries, 60 others are Intelsat users. The Soviet Union is the latest to sign on for membership – Poland and Hungary are in the process of joining. Almost 40 countries use Intelsat transponders to provide their domestic telephone service.

Still, Intelsat feels the heat of competition. Snapping at its heels are government-owned regional satellite systems and two privately-owned systems: Pan American Satellite (PanAmSat), a Connecticut-based company which offers business services between the US and Latin America; and Asiasat, a year-old system servicing the Indian Ocean region.

The greater threat to Intelsat may come from the ocean floor. Fibre-optic submarine cables have increased substantially the capacity of copper cables, and additional higher capacity fibre-optic cables are planned.

Intelsat was founded in 1965 at the instigation of the then US President John Kennedy. He wanted both to win favour in the Third World during the heights of the Cold War but also to offer others the use of American space and telecommunications technology. The organisation is still imbued with strains of realism and idealism – a determination to compete and an awareness of the benefits to be derived from improved global communications.

The system has developed from a single satellite in 1965 to a network of 15 satellites which beam telephony, television, facsimile and data communications over more than 2,200 separate communication pathways. As of April 1990, Intelsat carried almost 120,000 full-time channels and more than 100 full-time leases for television, domestic and specialised business applications, submarine fibre-optic and analogue cable restoration, as well as providing capacity for the International Maritime Satellite Organisation and UN peacekeeping operations.

In the gleaming-silver futuristic headquarters in Washington, Intelsat officials study trends and plot competitive strategies. They have begun to offer "benefits for efficiencies". Users which digitalise, making four channels out of one, pay only the cost of one channel.

The greater threat to Intelsat may come from the ocean floor. Fibre-optic technology has greatly increased the capacity of cables

Those which sign up for long-term commitments get lower prices.

The competing satellite systems "are not making money", says Mr Robert Kinzie, Intelsat's director of strategic planning. One regional system, he claims, has shown a profit only through "creative bookkeeping"; another because many of its old satellites "went off the books".

With one innovation after another, the consortium has been able to offer new services while reducing its rates.

In 1985, when entrepreneurs were clamouring for permission to establish privately-owned separate systems, Intelsat began to sell and lease surplus transponders for domestic signals. This led to the establishment of many domestic systems in place today. Would-be competitors complained Intelsat was "dumping" transponders to block the creation of separate systems.

In 1987, Mr Rene Anselmo, chairman of PanAmSat, filed a suit against Comsat (the US national representative), charging that it had employed "predatory pricing tactics" along with Intelsat to keep out competition. The suit alleges that Comsat "has caused Intelsat to build excess capacity using US rate payer guaranteed funds ... and used this capacity to dump transponders on the international market."

The courts have yet to agree with Mr Anselmo, and the suit is being contested. Mr John Hampton, Intelsat's acting director-general, says that the business downturn in the early 1980s and more successful launches than had been expected had left the consortium with excess capacity. The transponders were put on the market to recover costs.

Growth has been strong since then and it is expected to continue. Now the concern is for getting sufficient capacity to meet the explosive demand, Mr Hampton says.

Six years ago, Intelsat agreed to US demands to approve and co-ordinate the establishment of separate systems. However, on grounds of keeping the system from "significant economic harm", it retained three-quarters of the business by reserving the rights to all telephony and switched data.

That decision is under attack. PanAmSat is petitioning for the right to tap into the US telephone-switching network. Intelsat officials do not see the need; they say they can provide capacity to users "at cost" because economies of scale allows the co-operative to operate most efficiently.

Intelsat's vast resources provide numerous advantages. Planning is underway for a rescue mission of Intelsat VI, which failed to achieve geostationary orbit due to a launch vehicle malfunction. The mission is planned for April 1992 on the maiden flight of the shuttle Endeavor, during which astronauts are to capture the satellite, bring it into the shuttle bay, attach a new motor and release it.

Mr Kinzie says that only a huge organisation, like Intelsat, with world-class technical expertise could afford the loss of a satellite and the $180m cost of the rescue. However, he and other Intelsat officials are "seriously worried" about competition. They see vendors moving from defence industries into the space business, and regional systems motivated largely by political aims.

"The worse they do, the more desperate they get to try to expand their base to cover their costs", says Mr Kinzie. "We have to be doubly vigilant and competitive."

Although a monopoly, Intelsat is driven by the demands of its members for competitive pricing. Some users, however, claim the savings are not passed through Intelsat's national representatives to individual users.

A spokesman for AT&T acknowledges that Intelsat has achieved price reductions. However, he says, only competition from other systems will ensure that the rates stay as low as possible.

Nancy Dunne

Profile: INMARSAT

In touch around the world

PROVIDING communications in areas where this has previously been impossible is the task to which Inmarsat, the 65-member country co-operative, is dedicated.

The organisation was established in 1979 at the request of the International Maritime Organisation, which wanted to use satellites to provide an essential communications requirement for ocean-going vessels. However, Inmarsat is now developing services for aircraft, and remote regions not served by fixed telecommunications links.

Inmarsat's eight satellites give virtual global coverage, except for the extreme polar regions and a narrow gap extending north-south through North America down into the south-east Pacific. Four new high-capacity satellites, known as Inmarsat-2, are being launched this year; a further four, Inmarsat-3, are due to be launched in 1994 and 1995.

While new satellites provide more capacity, technological advances in services and subscriber equipment mean an increasing number of people can afford Inmarsat services.

Last January, Inmarsat launched a new messaging service called Inmarsat-C, which is cheaper and smaller than the traditional Inmarsat-A service. This means that fishing boats and small cargo ships can now maintain vital links with their onshore businesses and distress services.

The importance of Inmarsat-C is not restricted to maritime applications, however. Companies such as Toshiba of Japan are developing Inmarsat-C terminals that are no bigger than the average briefcase – ideal for those such as journalists, aid workers or oil exploration teams whose work takes them to remote areas.

Mr Jai Singh, Inmarsat's general manager for land-mobile services, says that 43 per cent of the 2,000 Inmarsat-C subscribers come into this category, and he expects there will soon be more land-mobile than maritime users. Inmarsat services for land-based users look set to become even more popular when the Inmarsat-M service is launched at the end of 1992 or early in 1993. Unlike Inmarsat-C, this service will offer voice and data communications.

Internal forecasts indicate, however, that the land-mobile sector across the full range of Inmarsat services will not be as important as the maritime and aeronautical markets. Maritime communications still account for 80 per cent to 85 per cent of Inmarsat's revenues, according to the organisation's director-general, Mr Olof Lundberg, while demand for aeronautical services is expected to grow rapidly.

Mr Lundberg believes every airline will soon have an in-flight telephone service. In the Inmarsat vision of the future, there will be a telephone installed on the back of every seat that can used by any passenger who owns a credit card. With 1bn people travelling by aircraft every year, demand could be enormous.

Inmarsat's in-flight telephone service was launched commercially last year after lengthy trials with British Airways. To date, only one international operator, Singapore Airlines, has committed itself to the service, but Mr Lundberg puts the sluggish start down to recession in the airline industry.

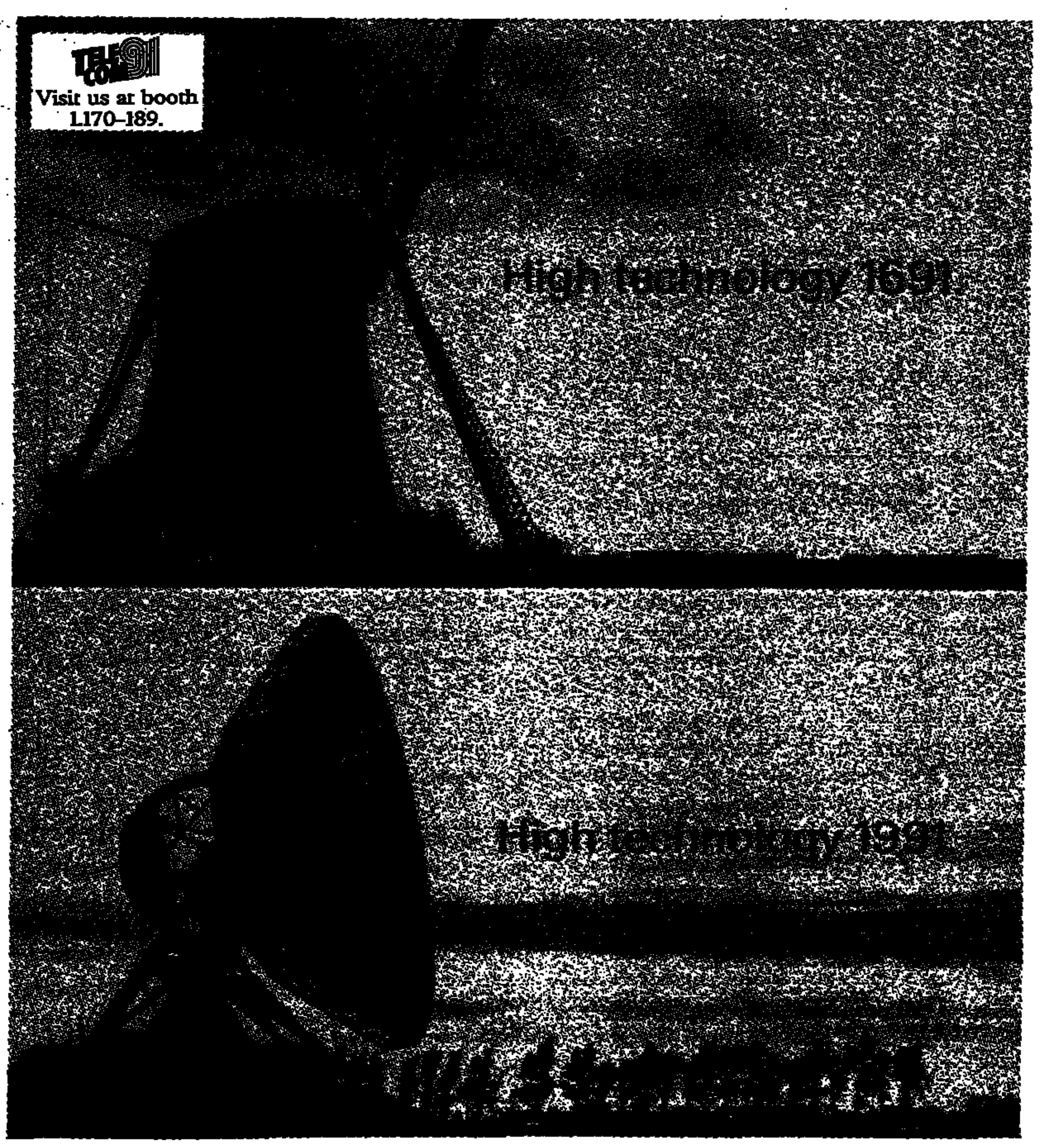
Inmarsat is prepared to evolve in whatever direction the market takes it; as Mr Lundberg says, "we were created by our customers." If airlines start clamouring for on-board telephones, then Inmarsat will expand into this area.

The evolution of Inmarsat's market could be matched by a change in a way the organisation itself operates. Inmarsat is jointly owned by 65 telephone operators, most of which are state monopolies. Mr Lundberg describes Inmarsat as a "hybrid type of organisation" which is "governmental yet commercial".

The areas in which Inmarsat operates will face increasing competition. In the US, a company called Qualcomm is operating a mobile messaging service known as Omnitracs, which is similar to Inmarsat-C. A European version, Euteltracs, was launched at the beginning of this year. Meanwhile, Motorola, one of the world's two leading suppliers of mobile communications services, is working on a project known as Iridium that would allow users to make voice calls via hand-portable terminals anywhere in the world.

Faced with such competition, Mr Lundberg sees a need for "fundamental institutional change" in the way that Inmarsat operates. He is anxious that Inmarsat "has the ability to move fast"; Inmarsat board meetings often last for a week. What Inmarsat needs, he says, is to adopt a financial and ownership structure similar to that of of a public limited company.

Mark Newman



Profile: EUTELSAT

Efficiency threatened

ONE OF Aesop's lesser known fables concerns a bear who takes a shine to a toad and to protect it, puts it under a rock. Unfortunately,the toad is crushed and the bear left friendless. In the version told by Mr Jean Grenier, director-general of Eutelsat, the satellite consortium plays the toad, the European Commission is the bear and the rock is Brussels's Green Paper on satellite communications.

If they were to be implemented,the Commission's proposals would radically alter Eutelsat's relationship with its consortium members and threaten its place in the satellite service market.

Eutelsat was set up in 1977 to provide satellite services to a consortium – now numbering 28 – consisting mostly of state-owned telecoms operators. To use Eutelsat's satellites, organisations and individuals must use the signatory in the country in question. The customer is then invoiced by the member which charges, some say too heaftily, for its service.

It is this aspect of the market which has caught the attention of the European Commission. It has proposed an "open skies" policy which would allow present third parties to negotiate directly with Eutelsat – or any other satellite group.

Mr Grenier says: "I am very disappointed with their proposals. Eutelsat is efficient, useful and low-priced. Of course it is necessary to change some of the rules and to introduce more elements of competition, but the Commission seems to believe that you cannot be an efficient organisation unless you are 100 per cent private."

Mr Grenier is a strong supporter of the changes to the UK telecoms system which has seen seven licences granted so that British Eutelsat users have a choice of intermediaries. Licence choice is being voluntarily extended to other EC members, in particular to two of the staunchest supporters of state-owned telecoms operators, France and Germany. A reciprocal agreement between these two and the UK means that Eutelsat users can use licence holders in any of the three countries.

Mr Grenier believes that the Commission has taken too [illegible] tel- [illegible] con-

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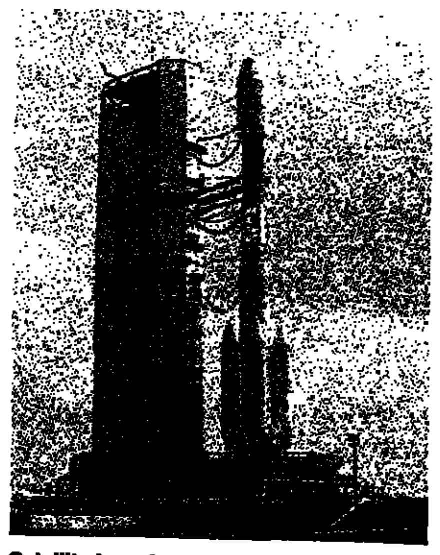


Satellite launch vehicle

profit-making organisation created by a treaty, which offers a comprehensive satellite service to Europe. It is important to Europe that we have such an infrastructure and it is one which would never exist under pure competition."

A decision on the Commission's proposals is expected by the end of the year.

The opening up of eastern Europe presents Eutelsat with one of its biggest challenges – and with it the prospect of extending its influence well out of Brussels grasp and to further commercial safety. A Eutelsat satellite scheduled to be launched in 1993 is to have its transponders changed to include new tracts of the Soviet Union. Romania and Poland have recently joined the organisation.

Minimum membership costs around Ecu50,000 (US$59,000) a year which is used to pay for the roughly Ecu 120m costs of building and launching a satellite. Members attend board meetings to decide future satellite policy and vote according to their amount of usage which in turn determines the amount of capital contributions. Spain, France, Britain and Germany are the usual top four by a wide margin.

To further strengthen Eutelsat's position, Mr Grenier is to propose to the board differential pricing for members and non-members. At present, for example, members such as BT are charged as much as second parties like the Egyptian telephone authority for using Eutelsat. Mr Grenier says he will propose a differential in the region of 10 per cent, "because the satellite business is a risky one and those who take the risk should get the advantage."

Another potential string to Eutelsat's bow is the advent of high definition television (HDTV). TV services to cable and dishes account for 60 per cent of Eutelsat's annual Ecu 122m income and the EC's push to develop its own standard separate from the Japanese and the Americans will strengthen Eutelsat's hand.

Three 40-channel special HDTV-dedicated satellites are to be launched by Eutelsat from 1996, but as the race has hotted up so has Europe's anxiety at being left behind – prompting Italy, France, Germany and Austria to order an initial HDTV satellite launch in 1993.

With such technological developments and political change opening up frontiers to the east, Mr Grenier remains optimistic about Eutelsat's long-term future.

He says: "We are a fragile organisation,but if we are allowed to develop I think we will see more members and more licence holders. This will allow better access to the system, more flexibility and a first-rate efficient satellite system for Europe."

Christopher Price

هكذا منه بالأصل

The development of telephones is coming to a head

VIDEOTELEPHONES

Face up to the future of conversations

THE PHONE rings. You push your videophone smart card into your PC and a voice on the line says "hi" as a face on the computer screen mouths the words. Above the monitor, on a tiny tripod, a camera the size of a finger flickers and across the world, you can be seen as well as heard. Far-fetched?

Hardly. In December, several of Europe's leading telecoms operators will begin pan-European trials of videotelephones — some of which will be embedded in personal computers. These are expected to lead to a service for business users beginning by the end of 1992. A service for home users is likely to be operational a year later.

Picture telephones, as they were formerly known, have been under serious technological consideration for a number of years. Developments in the video conferencing arena have brought the prospect much closer, but it is the spread of digital telephone networks — or ISDN — which has given the project its greatest boost.

Picture quality has been one of the biggest problems dogging development. Conventional analogue telephone lines do not have the capability to transmit information in either the capacity or quality that make developments such as videotelephones viable.

Picture telephones have been under serious technological consideration for a number of years

Digital networks have solved the first part of the equation by allowing more complex information to be sent at a lower cost and higher quality. Since January an ISDN service has been available in Britain to all major business users. BT says as the network expands so will the facilities available and the number of customers able to be connected.

ISDN has spurred manufacturers and operators to develop intergrated equipment capable of transmitting and receiving high-quality moving pictures along telephone lines. Advances in codec (Coder/Decoder) compressing devices which digitalise visual images has meant that the 140 mega bits per second of transmission space needed has now been compressed to just 64 kilo bits/second — the carrying capacity of an ISDN line.

The effect is to reduce the potential cost of using the videotelephone to that of a normal telephone call, although there will be some loss of quality.

However, the restricted coverage of ISDN is cause for some concern.

Dennis Bonnie, operations manager at GPT Video Systems, says ISDN has still to make its impact felt and is cautious about how soon the business market will take off. "Our major concern is network availability. You can be too early in marketing as well as too late and we feel the lift off could be slower than some analysts think."

That said, GPT has a standalone videotelephone unit ready to market and expects US sales — where ISDN is more widespread — to reach ,000 in 1992 and 100,000 by 1995.

BT is working on one design which will incorporate a four inch camera set into a terminal with a nine by four inch screen and telephone. Another design incorporates just the camera and screen and would be adaptable to existing office and home telephones.

It is the conversion card — which will take the form of a four by eight inch printed circuit board — for PCs under development which offers the most exciting business potential.

It will fit into the expansion slot normally reserved for extra memory or graphic facility and allow the PC to transmit and receive video pictures of near TV quality.

In the machines under trial users can deny callers video access and also use a self-view mode to look at themselves before going "live". "Some people seem genuinely horrified by videotelephones," says BT's Jim Baron. "But within a few years they will be as commonplace as mobile phones."

Operators taking part in the European field test include BT, Deutsche Bundespost, France Telecom, Norwegian Telecom, PTT Telecom (Netherlands) and SIP Italy.

"It's very important that with all these developments going on that the equipment we end up with can talk to each other," says Steve Gandy, sales and marketing manager at BT Visual and Broadcast Services. "We hope the upshot of this test will be closer co-operation between the operators and manufacturers. We are now actively seeking alliances."

BT is investing £10m a year in videotelephone R&D and hopes to have machines on the market by next autumn. Initial costs are likely to be in the region of £5,000 for a complete unit connected to an ISDN line. "Like with any new product and service the entry cost is quite high," says Gandy, "but as the volume increases the price will fall rapidly."

All the manufacturers and operators agree that the most lucrative market will be when the home videotelephone business takes off. For this reason, BT is estimating the European market will exceed $3bn a year within the next three years.

In the machines under trial users can use a self-view mode to look at themselves before going 'live'

Such has been the leap forward in equipment development that next year should also see the launch of videotelephones for the analogue telephone market.

These would incorporate two inch square screens and mini-camera that would plug into existing telephone sockets. The poor picture quality, however, means that the size of the screen has to be restricted and the voice quality is also "not brilliant" in the words of one manufacturer. However, analogue videotelephones are seen within the industry as a potential primer for the home market for the eventual arrival of the grander ISDN version.

Christopher Price

Video-conferencing has yet to catch on, writes **Peter Purton**

Still waiting for take-off

A video conference in session: the technique is beginning to catch on throughout the world

AFTER one of the longest gestation periods in telecommunications, video-conferencing may be about to take off.

Theoretically, the technology has been with us since 1936, when the first link was set up at the International Broadcasting Exhibition in Berlin. But it was not used commercially until the 1970s, and even then only by a few users. Today there are estimated to be only around 5,000 video-conferencing studios in use worldwide.

The Gulf war and the associated threat of air piracy brought what seemed to be a dramatic upturn in the fortunes of video-conferencing. The UK's BT, Germany's Deutsche Bundespost Telekom and France Telecom were some of the public video-conferencing studio operators to announce tenfold and higher increases in usage as companies banned executives from flying.

It did not last. As soon as the war ended, usage levels sank to near pre-war levels. Mr Rob Mitro, vice-president for sales and marketing of Picturetel Corporation, the US-based conference equipment maker, is not surprised. "Public studios are not that much better than travel. Once you have to move from the office, you might as well travel all the way," he notes.

Successful video-conferencing, says Mr Mitro, "requires spontaneity". The problem to date has concerned bandwidths. Full broadcast quality television requires transmission lines with capacities of 140Mbit/s. For video-conferencing, a lesser quality is acceptable, but even then capacities measured in tens of millions of bits of information per second are required if no way is found of compressing the signal.

Even with compression, video-conferencing has had to rely on expensive 2Mbit/s leased lines. "The market has really stumbled and staggered along for 10 years", admits Mr Mitro. But the development of technologies able to exploit dial-up links is changing all that, he believes. Conferencing is now possible over lines with 64kbit/s, obviating the need for dedicated leased lines and studios.

Mr Mitro believes that video-conferencing began to take off in the US in 1988, and he believes it is beginning to catch on in the rest of the world. "People are used to a video culture. The market is doubling every year. We are shipping in the order of 2,200 units this year — next year we expect to treble that", he says.

Mr Mitro also thinks that the profile of users is changing. "A couple of years ago we could see a predominance of aerospace and distribution companies, but now people below the Fortune 500 are beginning to get attracted." With every new convert, the trend accelerates; as people get to know the benefits of video-conferencing, it spreads deeper and deeper into the organisation — and to its associates. "A car maker may get its component suppliers on board", says Mr Mitro.

In spite of his optimism, Mr Mitro has no fantasies. Though he admits that video-conferencing will not replace travel, he believes it adds a new level of interaction. "I don't think anybody would claim video-conferencing could be a complete substitute for travelling, but it could replace 75 per cent of it. You can do most things you can do in an ordinary meeting once you have got used to it."

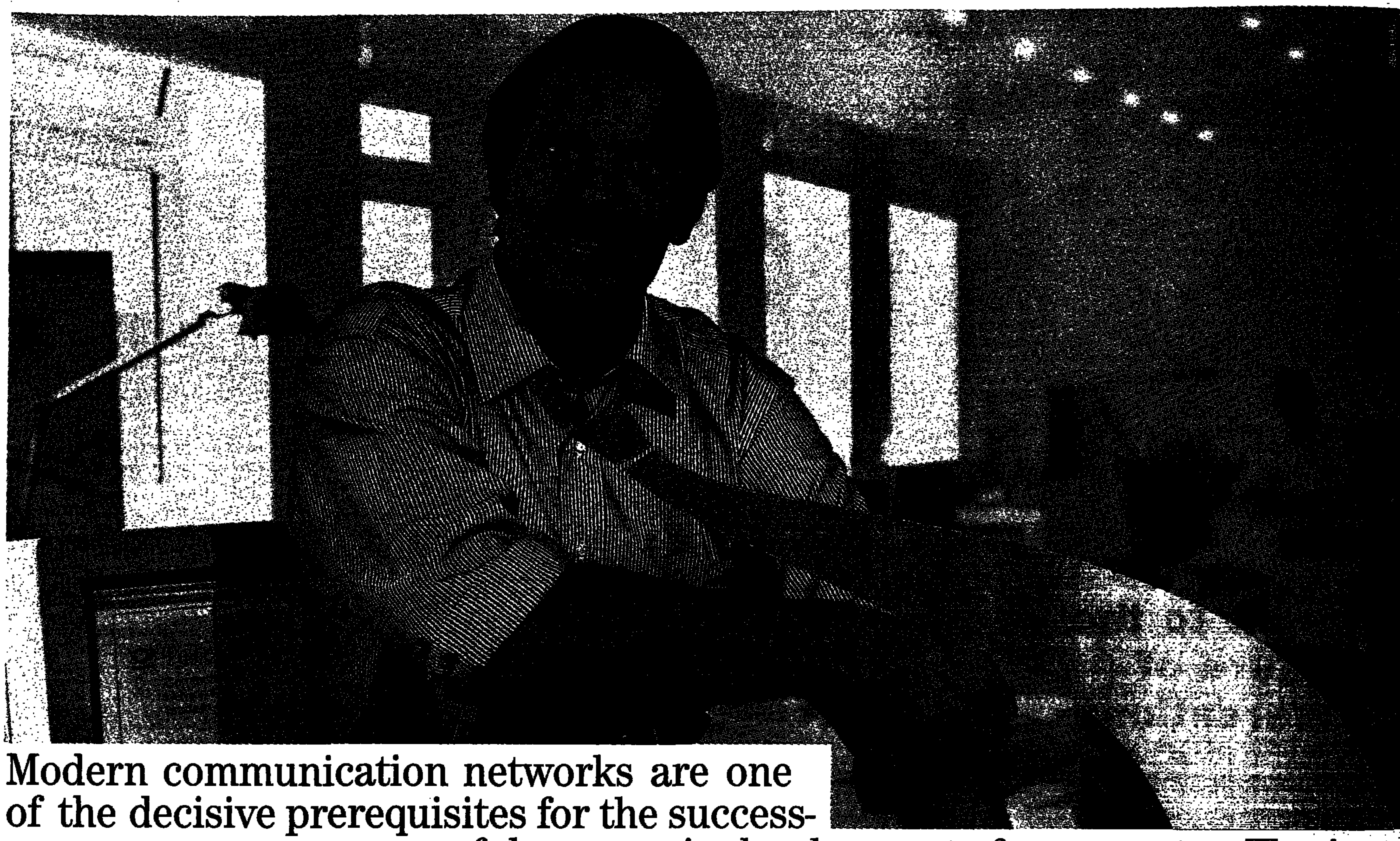
The cost of travel has been rising gradually while the cost of telecommunications has been falling. Taking improvements in compression technology into account, Mr Mitro estimates a transatlantic video-conferencing link using his company's equipment now costs only one-fifth of the price two years ago. Equipment prices are also falling.

Modern equipment no longer uses just integrated encoding/decoding devices (codecs), but has all elements of the system integrated. The result is a dramatic cut in price, from more than $50,000 for a dial-up conferencing system two years ago to just $20,000 with the latest generation.

Video-conferencing is also likely to benefit from the emerging trend towards group working. Pioneered by software developers, this allows teams in different parts of the world to work more closely together. On a computer level, the links are already in place. With the emergence of low bit rate video-conferencing, the added human interaction of an image of the other people in the group is becoming an added asset. Group working is also spreading to other business areas, such as design and accounts.

The next stage of development is likely to be integration with computer networking. Picturetel is examining putting the system electronics on a board which can fit into the backplate of a desktop or personal computer. The video-conference could then take place within a window on the PC, running alongside other programmes.

Mr Mitro expects to produce the first prototype of the new chips necessary for the project next year. By 1993, he hopes to be able to show a complete product. The target price is between $5,000 and $7,000. After two years it could be as low as $3,000, claims Mr Mitro. When prices reach this level, he believes, the market will really take off.



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Air lift: a helicopter helps lay fibre-optic telephone cable

FIBRE-OPTICS

Glass is at the heart of a revolution

F|BRE-OPTICS are revolutionising telecommunications. For decades the capac-ty bottleneck dictated by cop-per-based cable technologies, has dogged the industry. While possible in theory, a host of nnovative telecommunications echnologies from videotele-phones to global computing ystems have proven impossi-ble – or at best available only o a very select few – in prac-ice. These hair thin strands of lass, however, are changing ll that.

The long-distance telecom-munications networks of the ndustrialised nations are now lmost completely based on fibre, allowing carriers to chieve significant cost-savings hrough the benefits of the cale of capacity provided by he glass strands. As the price f fibre falls, it is also being eployed in other areas of the ublic service telecommunica-ons network.

Fibre to the kerb is the atchphrase describing the tec-ology's progress towards the ubscriber. In a number of istances it has already eached the end user. Cable levision networks, in some ases based on fibre, are now onnecting large numbers of omes and businesses in urope.

And in some countries they e being used not only to eliver television and other roadcast signals but also for formation services, some of em interactive, and telepho-y.

Fibre is also creeping into e office. Local area networks ased on the US Fibre Distrib-ted Data Interface standard e fast becoming the new ffice computer communica-ons standard.

And structured wiring ystems, where fibre is laid roughout a building or site, r use as a medium for a vari-y of different communica-ons services from voice and ata to video, is also being stalled.

But with all of its advan-ges, the fibre revolution is so presenting its problems. he first is simply a question how to manage all that formation flow.

The second is a question of ow to ensure the information aches its required destina-on.

The telecommunications dustry is finding itself turned n its head by fibre. The trans-ission of information is no nger the bottleneck it once as but routeing and switch-g, not that long ago the glam-ur technology, is now strug-ing to keep pace.

The world's leading telecom-unications equipment mak-s have made an opportunity it of this change in the indus-y. No longer are they empha-sing the central role of the lecommunications exchange. stead they are presenting istomers with an integrated view of the telecommunica-tions network.

Cableship: launched by BT to maintain fibre-optic systems

Canada's Northern Telecom led the field with the announcement of its Fibre-world public telecommunica-tions concept. It was quickly followed by the US's AT&T's Servicenet 2000, Siemens's Vision ONE, Ericsson's ETNA and Alcatel's 1000 Series. During the 1990s, predicts Ha'kan Jansson, president of Ericsson Telecom, thanks to fibre the money spent by carriers on transmission will comfortably outstrip that spent on switching.

The transmission sector finds itself at a critical point, he notes. Carriers are being faced with shorter and shorter delivery times for network access while the number of new services on offer is rising.

Another problem facing carriers is that their private circuit customers very often know more about the quality of the network than the network operator.

And to satisfy customers' highest priority, guaranteed availability, spare capacity is needed leading to inefficient networks.

ETNA (Ericsson Telecommunications Network Architecture), along with Ericsson's competitors' initiatives, is designed to provide a way out of these dilemmas. The emphasis is on managing bandwidth on demand.

The key is the development of computer-controlled synchronous networks. Today's telecommunications networks are based on the plesiochronous transmission of information – a view of transmission that sees information channels as separate logical and physical entities.

As long as the volumes of information transmitted were relatively small, plesiochronous technology offered a reasonably efficient method of transferring information. In the fibre era, however, its inefficiencies are being shown up, and perhaps more important, its restrictions on operating flexibility are beginning to become annoying to network operators.

Synchronous technology sees the network as a single entity. All of its components work in unison. The moment a signal leaves its starting point it can be predicted exactly when it will arrive at its destination.

The certainty of synchronous technology allows it to be more efficiently exploited. And combined with network technology it offers a new level of flexibility.

"If a new company moves into the area, you can provide it with the required extra 2Mbit/s circuits simply by issuing the right command," notes Stefan Danielsson, responsible for transmission at Ericsson Telecom.

When Germany, as the first country in Europe, adds synchronous technology to its main transmission network in 1992, it will instantly double its existing capacity, without adding any new cables or fibres; simply by arranging new connections.

Australia and the UK are expected to follow the German lead before the end of 1993.

Peter Purton

esiree Halac of the Keep Able Foundation emonstrates a telephone switchboard which e can control by means of a chin switch.

This hands-free device enables quadraple-cs to use the telephone or switchboard facili-s without the need to touch them. The voice of the caller is amplified and a microphone in the switchboard picks up the voice of the user.

The telephone package was designed by BT subsidiary Ferntech Systems in Liverpool, which employs disabled people to make communications products for the disabled.

Intelligent networks make sense – and money

Switching into profit

MODERN telecommunications is largely the story of applying the computer, and what we have learned from its use, to the transfer of information.

Nowhere is this more true than with intelligent networks or INs, which are expected to be one of the main areas of telecommunications industry growth in the 1990s. One of the best examples of an intelligent network is a cellular radio system where "the network" regulates everything from access authorisation to tracing the whereabouts of mobile telephones and ensuring that all the calls made on them are charged.

The intelligent network idea goes back even further. Probably its best known application is for the automatic handling of freephone numbers – so-called Green or 800 numbers.

Here it is the network's job to recognise that the calling party is not billable but the called party. Ironically in neither case would anybody have dreamed of calling them intelligent networks until the last few years.

Thanks to US activity in particular, the concept has been clearly defined and manufacturers now see it as a marketable entity.

The money-earning capacity for services based on intelligent networks is proven. Twenty years after their introduction, it is estimated by AT&T that freephone and other special service calls make up about 60 per cent of lucrative long distance telephone traffic in the US.

In Europe and Asia, telephone network operators have been less commercially oriented and the telephone habit has been slower to develop. Freephone and other intelligent network services have been relatively neglected. Not so today. With competition from the private sector beginning to erode their profits, the revenue possibilities of new businesses such as intelligent network services are attracting the close interest of many PTTs (national carriers).

Intelligent network services are in operation or planned in France, Germany, the UK, Spain and Italy. "An intelligent network creates traffic, but not only that, it creates it with a premium" says Colin Golder, director of switching (product management) for AT & T Network Systems International which has supplied three of Europe's systems. "The PTTs in one way or another collect part of that premium."

The idea behind intelligent networks is that by using sophisticated telephone switches linked to a small number of centralised data bases, national telephone systems can be made to do much more than simply connect one paying subscriber to another.

In addition to free phone traffic, intelligent networks can provide nationwide access at local call rates, a variety of information services at premium rates, deferred payment calling and tele-voting.

Intelligent network services are operating or planned in France, Germany, the UK, Spain and Italy

They can even be set up to allow personal numbering, in which incoming calls are routed around the network according to changing location of individual subscribers on the move.

For business users, intelligent networks allow private networks to be run over public lines and facilitate a range of value added and tele-marketing services. "What the intelligent network does is to remove restrictions that hitherto existed in the network," says Mr Golder.

"It frees routing, billing and numbering. It removes all the restrictions. Services are as far as your imagination can reach with that degree of freedom."

As well as generating much-needed additional revenues for operators, intelligent network services can be implemented rapidly and at low cost using centralised data bases and existing telephone exchanges.

"Our objective is to introduce new services without having to change the exchanges," says Maurice Revel, in charge of building France Telecom's intelligent network services on existing switches supplied by Alcatel.

Intelligent network equipment suppliers, including Alcatel, AT & T, Ericsson, GPT, Northern Telecom and Siemens, see the technology as both a parallel commercial opportunity to established exchange products and as a possible way to break into national and regional markets.

However, intelligent network technology presents problems as well as commercial opportunities to service operators and manufacturers alike.

Some types of intelligent network service require PTTs to transfer some degree of overall network control to their customers. Intelligent networks also cut across traditional PTT management and operational structures.

"For the first time somebody other than the PTT can start to control the network" says Golder. "It comes as a bit of a surprise at the beginning but they're getting used to it. And, in fact, they have to because that is part of the service they're offering."

For telephone exchange suppliers the intelligent network opportunity is distinctly double-edged.

While new business may be generated, intelligent networks are to a large extent switch-independent, making it possible for PTTs to ignore existing favoured supplier arrangements.

Also, since network management and data processing are crucial parts of the intelligent network technology mix, suppliers such as DEC, IBM, STC, Stratus and Tandem from outside the mainstream public exchange field are muscling into the act.

Peter Purton

ISDN is a technology looking for customers

Star in the making

FOUR years ago, at the prestigious Telecom show in Geneva, there was only one star.

It was ISDN (integrated services digital network), a technology demonstrated on almost every exhibition stand using digital phones, personal computers, video-conferencing cameras and even videophones.

Confident voices from the equipment manufacturers and the phone companies assured that the nicknames loaded on the ISDN acronym – everything from "integrated services I don't need" to "I still don't know" (usually accompanied by the shake of a customer head) – were a thing of the past. ISDN, they said, was poised to take off.

Four years later ISDN is still a technology looking for customers, although most phone companies in Europe, the Far East and the US have introduced ISDN services. There are at least a score of services from different phone companies in the US.

The problem for phone companies trying to market ISDN is that it has no obvious single mass-market application. It can be used for video-conferencing or facsimile or low-speed data transmission – but so can other types of communications lines.

Basic rate ISDN services comprise two 64 kilobit per second channels which can transmit voice or data – one channel can transmit about 1,600 words of text every second.

For large-scale data users such services lack the speed of dedicated computer-to-computer data lines – although most phone companies are also selling packages of 30 64 kbit/s channels, known as primary rate ISDN.

For the smaller business phone user it is often difficult to see why the company should rent the more expensive digital lines when analogue services are perfectly adequate for most needs.

In the UK, where there are double the number of point-to-point digital leased lines as in the whole of the rest of Europe, BT has found there is a market for ISDN services with large customers which want to extend their private networks. Instead of incurring the expense of dedicated leased lines to offices in more remote locations, the organisations can link their smaller offices into the private network using ISDN.

To date, BT has deployed 25,000 basic rate ISDN systems but has customers for only 3,000.

ISDN has proved more popular in countries which introduced basic rate ISDN services before BT. Nippon Telegraph and Telephone (NTT), the Japanese phone company, had just over 41,000 ISDN lines installed by the end of June, and is planning 70,000 by the end of the year. But it is now turning its attention to the next generation of broadband ISDN services as the real source of revenue.

One phone company which has decided to attack the dearth of applications is France Telecom. It opened ISDN services in Paris and Brittany in 1987 and by last year was providing its service, called Numeris, to any business in France which requested it.

France Telecom, to foster the development of a variety of applications which could use Numeris, has formed partnerships with some 50 small businesses to encourage the development of services.

Companies selected for support (including financial assistance) must have an innovative application with wide-spread appeal says Alain Bereziat, regional director for France Telecom in Montpellier.

Services already being used on the Numeris network include one which transfers medical images and another which transfers diagrams from repair manuals from one site to another over the phone line. Another enables would-be holiday makers to use touch screens to select information on different resorts, with pictures and text of the location transmitted from a central database to the local travel agency.

Digital voice services are also in use with Audiocataloge, developed by Xis, of Montpellier. It enables customers in 11 record stores belonging to FNAC, the French music retail chain, to listen to a selection of music before making a purchase. Using a PC with a touch-sensitive screen and a headset, customers scroll through menus until they find the music they want to listen to.

Faster facsimile services – some eight times faster than today's analogue services – are also possible, while Bereziat believes that high-quality moving images for videoconferencing will be available in about two years.

By the end of last year France Telecom had customers for 30,000 basic ISDN access lines – each with two 64 Kbit/s lines.

France, with Germany, has relatively few digital leased lines in service so they are likely to lead the field in the number of ISDN lines installed in Europe, according to market consultants Dataquest.

ISDN is ideal for transmitting images

Seventy-five per cent of the 64,000 basic rate lines in use by the middle of this year were in those two countries, and by the end of 1995 France and Germany will still have more than 50 per cent of the 800,000 lines in use, predicts Dataquest.

Dataquest forecasts that there will be nearly 1.5m equivalent basic rate ISDN lines (basic rate lines plus the equivalent in primary rate lines) by the end of 1995. But that is still only a fraction compared to the 200m standard phone lines that will be in use throughout Europe.

Della Bradshaw

DATA COMMUNICATIONS

Belated explosion imminent

THE 1970s were full of reports of an imminent explosion of data communications.

The British invention of videotex had been turned into the world's first electronic newspaper service, Prestel, the first electronic mail services were launched in the US and a new breed of dedicated public data networks came into operation across Europe. The explosion never came but there are now indications that it may be about to happen.

In 1988, Germany's national carrier Deutsche Bundespost Telekom was estimating that less than 5 per cent of the communications it carried over its network were of computer data. In general, users were finding data communications too expensive and too slow but – perhaps most significantly – too complicated.

Using data communications can even make hardened computer buffs wince. Not only do telephone numbers, IDs (identification codes) and passwords have to be remembered but also so-called communications protocol details such as stop bits, baud rates, parities and word lengths.

Software has helped solve these problems, but a lack of standards makes life harder than it could be or should be. Speed is an area where advances are undeniable.

In the early 1980s, the best the average data communications user could hope for was to send the equivalent of an A4 page of double-spaced typed manuscript every seven seconds. Today 10 pages a second should present no problems. Combined with the relative fall in the cost of telecommunications, this development means that expense has also become less of a deterrent.

Information on what proportion of telecommunications traffic is based on data is hard to come by. Mr Jon Moggeridge, spokesman for BT (formerly British Telecommunications), admits: "It is even difficult for us to tell exactly how much data goes over our public telephone network."

Short of monitoring every call, BT uses statistical methods to estimate that the proportion of traffic accounted for by data. One indication of the rise in data traffic over the public telephone network may come from the increased usage of data terminals on the network.

According to market analysts BIS Strategic Decisions, for example, in the five years between 1986 and 1990 usage of telephone lines for France's Minitel videotex system alone rose three-fold to over 100m hours while ordinary voice telephone usage rose by only 70 per cent.

The number of fax terminals in use in France over the same period rose twelvefold. And in the US, a recent survey by the government's Census Office revealed 3m households – one in 25 – now have a computer connected to a modem.

Another indication may be the rise in popularity of private leased circuits amongst corporate users. Such lines, which are used mainly to communicate data, are now said to account for some 15 per cent of the BT's revenues from telecommunications services.

An indication of the rise in data traffic over the network may come from the increased use of data terminals

The real breakthrough for mass market data communications is expected to come with the roll-out of the integrated services digital network (ISDN). In the UK this service was launched in February this year, somewhat later than in Japan, Germany, France and the US. But the UK plan is to press ahead with an investment plan which it hopes will put it ahead of all its rivals by the end of the year when there could be over 90,000 ISDN connections available, though not all would be used.

In contrast to only a year ago, the UK's ISDN future looks promising, observes Mr Steve Harbour who is responsible for ISDN products at UK computer maker ICL.

"Two things make the UK very exciting," he says. "Not only is ours now the most unregulated market in the world but BT is now about to leapfrog all the other carriers in terms of installed lines." Mr Harbour says there are six market drivers of ISDN:

- Reducing time to market;
- Product and service differentiation;
- Human resources utilisation;
- Global trading;
- Mergers and acquisitions; and
- Regional development.

According to business consultants McKinsey, a delay of six months in getting a new product launched can reduce profits from the new product by 30 per cent. Better communications between the groups involved in product development, which ISDN can provide will more than pay for themselves, argues Mr Harbour.

As far as product and service differentiation is concerned, ISDN-based technologies such as desk-top conferencing allow companies actually to show a solution to customers rather than describe it.

"You can put your products and services right on to the desks of your customers," he notes. With fewer people joining the workforce, ISDN can also help combat shortfalls in labour, notes Mr Harbour. "Experts can be located anywhere there is a telecommunications link."

In the era of global financial markets Mr Harbour says that ISDN can cut handover times between traders in one time zone and another from three-quarters of an hour to five to eight minutes by allowing them to share data. And when one company takes over or merges with another, ISDN could also help transfer business information.

"It can take weeks for a company to gain access to a new acquisition's corporate data – with ISDN and desk-top conferencing access could be instant," the BT expert asserts.

Already the Highlands and islands of Scotland and, assisted by the European Community's Star programme, Northern Ireland, have seen ISDN as a means of making their regions more attractive to foreign investors. "ISDN allows a company to distribute services over a wider area," Mr Harbour explains.

With or without ISDN, data communications looks set to become a significant segment of the telecommunications service market. Some analysts are even predicting that it may overtake voice as the dominant segment by the end of the decade. But predictions of imminent success are nothing new in this sector.

Peter Purton

PRIVATE NETWORKS

Backbone of the worldwide corporate structure

DATA communications networks began in the 1970s, when they were a utility which enabled companies to locate their computer centres in cheaper office accommodation outside the major cities. Now, they are mission-critical, the backbone of the corporate structure, without which trade would grind to a halt.

The scale and complexity of today's leading edge networks are a far cry from their predecessors. The early networks for data processing were built to a simple point to multi-point design. This meant that a central mainframe computer which held the organisation's entire database was hooked up to a number of smaller computers in other offices; a computer would make a call to the mainframe, and send or receive data.

In the mid to late 1980s, corporate data messaging networks emerged to carry internal messages and administrative data. These were usually separate from the processing network and large organisations often ended up with as many as 10 or 15 different networks.

In the past two years or so, network design has begun to evolve into a much more sophisticated structure. Businesses want to rationalise their lines and equipment into a single coherent network. At the same time, they want to take advantage of leading edge computer technology to restructure their data processing systems.

Cheaper, more powerful desktop computers are now used to handle much of the initial processing and pass the results to the mainframe, which has become just a "number cruncher". A further trend is for organisations to link together all their databases and processing facilities in what is becoming known as the "enterprise-wide" network.

Mr Ken Knap, who is in charge of technology for Citicorp Bank in Europe, says that the new network model is radically different from the old, and more complex to manage. "There are fewer host centres with totally integrated data. You'll end up with most of the initial processing being done on a PC network, but the analysis of the data is probably going to be on a database somewhere in a central data centre."

Some multi-national organisations are setting up data processing super-centres for an entire continent, and linking them via high-speed lines to individual national offices.

At the Sanwa Bank a new network is being designed to link its offices in London, New York and Tokyo. A data processing centre is being set up in London, which will handle the processing from its European offices; it will come on-line in two to three years' time.

A similar set-up already operates at Chase Manhattan Bank, which uses its Bournemouth, UK data processing centre to handle much of the work for its European offices.

Chase also leases direct fibre optic cable lines between the UK, the US and Japan, and has the capability to process data from Tokyo or New York on its Bournemouth computers.

One of the most ambitious projects is being installed by Visa International, the credit card company. Visa already carries more than 1.2bn transactions a year on its network. It is upgrading the technology to cater for what it believes will be a tripling in the number of credit card transactions by the end of the century.

The new design entails a global data processing hierarchy, consisting of four super-centres, which will process transactions for national and regional processing centres. They will be linked by high speed data communications multiplexers and fibre optic telephone lines. The regional centres in turn will have electronic links to the retail banks which are members of Visa.

Critical to these networks are more reliable phone lines, and equipment that is capable of faster transmission speeds. Both elements combine to enable the network to carry more data, and ensure that it gets to its destination without errors creeping in.

Several high capacity fibre optic cables have come into service in the past two years. They include PTAT and TAT8 across the Atlantic, the trans-Pacific fibre cable linking the US and Japan, and several undersea cables between the UK and Europe. They are better for data transmission because line errors occur less frequently than on copper cable, and they do not have the time delay problem of satellite.

Mr Knap believes that the network's reliability and robustness are most important factors. Citicorp, like many international banks, allows corporate customers direct access to its internal systems to obtain certain services. Those customers expect the network to be fully operational at all times.

The increased availability of fibre capacity is encouraging companies to consider new, faster transmission equipment such as the new frame relay standard. Frame relay has developed out of an existing data communications technique, known as X.25 packet switching, which has become widely used in the past four years.

Frame relay is far faster than X.25, and is able to take full advantage of today's fastest line speeds – 1.54 Megabits a second in the US, and two Megabits a second in Europe. Within the next 12 months, it will also be able to work to the emerging transmission standard of 45 Megabits a second.

Frame relay is suitable for companies that want to send high volumes of data, such as graphics or image. It is particularly designed to connect together personal computer networks which are located on different sites.

Few organisations have yet set up a frame relay network, although several are being tested. One trial on the BT Tymnet network in the US, entails a garment manufacturer with showrooms in cities all around the country. A frame relay system is being used not only to carry sales data between PC networks in the showrooms, but to transmit scanned images of forthcoming designs.

However, no network will be installed successfully unless the suppliers are willing to back up their customers when problems occur, as they inevitably do. Few to date can offer true multi-national support. Many equipment vendors give a list of countries in which they say their products are available, but the level of maintenance varies.

Some multi-national organisations are setting up super-centres for an entire continent, and linking them to individual national offices

"There are only a handful of companies that can provide a true European service. You get a lot of small Californian companies with great products but poor representation in parts of Europe, but a lot of European companies aren't well represented either," says Mr Jim McMahon, an independent networking consultant.

Some organisations are now specifying pan-European or global service levels as a condition of the supply contract. However, they tend to be those such as Chase Manhattan, which have enough clout or kudos for the vendors to accept their demands.

Monica Horten

PUBLIC DATA NETWORKS

French cause a stir and go underground

Getting the message: an engineer keeps in touch with HQ

WHEN France Telecom (FT) announced in May the setting up of its Transpac Network Services (TNS) public data network subsidiary in the UK, it created quite a stir in the UK telecommunications community. It was the first time that a national telecommunications administration from one European country had announced its intention to compete in the fixed network of another.

At the same time, however, it was an indication of ways forward – not only for FT, but for all operators of public data networks. TNS, which is 96 per cent owned by an FT group holding company, Cog com, and 4 per cent by a committee of its users, is investing several million pounds in the UK as it seeks to establish a broad base of users for its internationally standardised X.25 network provision services. It already claims to have an X.25 node in "every town within the M25" (about 100 nodes) and believes it could have the entire country wired inside a year.

The key to TNS's rapid roll-out plans is a new trend in corporate telecommunications – outsourcing. The French group's first outsourcing partner was London Regional Transport (LRT), which runs the underground system. In broad terms, the deal was that TNS would operate LRT's telecommunications and data communications network on its behalf, and that in return TNS would be allowed to offer services to third parties.

By using LRT's network, FT is within reach of 25 per cent or more of BT's customers. Many of these are particularly heavy users of data communications. The proportion of BT revenues subjected to competition by the move is even higher, given the level of usage in the City, which lies at the heart of the LRT system.

The deal may prove equally valuable to LRT. Industry experts estimate that companies can save up to 20 per cent of their overall communications costs by outsourcing the management and operation of their private networks.

Running a private network is a complicated business. As well as operation and equipment purchase, companies incur design, monitoring and management costs. There are also many indirect costs, such as accounts and personnel. The last point is proving particularly difficult, as the skilled personnel needed to operate telecommunications networks are much in demand. Then there are the problems associated with the lack of scale of many private networks.

Network usage tends to be uneven, with everybody wanting to use it at the same time. Yet most organisations will require 24-hour access to the network – particularly if they have global operations. "If a company wants 24-hour service, it has to have people all around the clock – even if they have nothing to do", notes Mr Peter Cook, responsible for marketing global network services at BT.

Mr Cook also points to what he describes as the "costs of risk". "Operations are dynamic – they may need to be quickly expanded or cut. If you acquire a company and suddenly find you go from 250 sites to 450, it can cause considerable headaches to those responsible for data communications," he says. "But if it is your only business, you can make the economies of scale.

"The pressures of a decline in demand and at the same time increased competition have led many companies to do exactly what the text book told them – concentrate on core business and farm out local costs" says Mr Cook. He estimates that outsourcing has lifted data traffic on his network by 150 per cent since last September.

The move towards the global economy is the main driving force, however. "Multinational used to be a buzzword for setting up a clone of yourself in another country. Globalisation is a way of working – putting your design facilities in the UK, your manufacturing in Spain and your marketing in California. Division of labour on a global basis", notes Mr Cook. If this is to be done efficiently, then global data networks are essential.

Global networking is proving attractive to public data network operators. It is the thinking behind FT's move in the UK and it also underlies many of BT's activities in the area.

In 1989, BT bought US public data network operator Tymnet which is estimated to control about half of the US public data network market. BT estimates that it can offer end-to-end managed data networking to more than 85 per cent of the world's data communications destinations.

Most of this access is via local carriers, but as with Tymnet, BT would like to gain direct access to customers, just as FT has in the UK. There are still many regulatory hurdles to cross, however. For instance, BT is prevented by French law from mounting a similar initiative in France to that which FT has launched in the UK.

Peter Purton

David Pilling examines the potential of managed data networks

Heavy traffic in the night

MR NIGEL BERRY, telecoms manager at the W. H. Smith Group, had a problem. The group's private data network, built in the early 1980s to link computers in more than 500 shops and warehouses throughout the UK, could no longer cope with the quantity of data traffic required.

So much of the equipment was obsolete, says Mr Berry, that to expand the network would have meant starting from scratch, a process involving huge expense in capital equipment and extra staff.

Mr Berry's solution was to sign a contract for a managed data network (MDN). Under an MDN contract, a third party specialist company installs, operates and manages a network tailored to the user's needs.

Just as a company might arrange to have its staff canteen run and managed by a catering specialist, so businesses are turning to third parties to run their data networks.

After putting the contract out to competitive tender, W. H. Smith signed a five-year £14m deal with Digital Equipment Company, UK subsidiary of the US computing giant DEC, to run data along Digital's private Easynet network.

Digital, which bought W. H. Smith's network for a "nominal" sum, connected Smith's sites via analogue "tails" to the Easynet "backbone".

The contract enables W. H. Smith to send agreed levels of data, largely at night, between various sites and its central office in Swindon. Because of the quantity and type of data sent, mainly for electronic point of sales (Epos) applications, Mr Berry felt that analogue tails were sufficient for Smith's needs.

However, as Digital's Mr Vic Hanton explains, the Easynet backbone of Megastream lines (operating at 2 and 4 megabits per second) is capable of more sophisticated applications such as videoconferencing. Digital, whose network links more than 450 locations in 43 countries, is negotiating further managed network contracts.

Businesses are turning to third parties to run their networks

The market for MDN is fairly modest, but shows every sign of rapid expansion. Mr Peter Cook, marketing manager for BT's data networks, believes MDN is one of the few beneficiaries of recession, as companies seek to offload large overheads and concentrate on core business.

As companies become more global, he believes, the need for fast, efficient communications will become an essential business requirement.

Put simply, says Mr Cook, the idea amounts to: "You do your business and we'll do ours, on the not apparently foolish assumption that we should be better at our business and you should be better at yours."

He acknowledges that some private networks are exceptionally well run, but feels that a large organisation with a built-up body of "corporate expertise" is likely to offer a better and more cost-efficient service.

One reason private networks are more expensive, he says, is that they need to be large enough to cope with peak levels of data traffic and are thus under-utilised.

With a shared network, a steady stream of data is maintained.

In 1989 BT bought Tymnet, a US data communications group, in an attempt to become a significant force in the global telecommunications market. It now offers a global MDN service to 1,000 cities.

More than 80 per cent of traffic is covered by end-to-end maintenance and billing service.

Subscribers report faults to BT customer outlets which refer them to 24-hour network management centres in London, Paris and San Jose. Bills are paid in one currency to a single point.

This "one-stop shopping" is a crucial benefit of MDN, cutting out the bureaucracy of dealing with a multitude of telecommunications companies.

MDN costs also tend to be predictable. Some lines are "all you can eat", with no ceiling on the amount of data transmitted.

Where a customer pays for usage, this element will usually be substantially less than the fixed charge.

The US-based Chubb Group of Insurers, which needed to set up a European data network, was keen on the "one-stop-shopping" aspect of MDN which it saw as a way of unravelling the bureaucratic tangle of dealing with several European PTTs.

Mr Bill Powers, assistant vice-president for telecommunications, last year signed a three-year agreement with Mercury, the Cable and Wireless subsidiary, under which Mercury was contracted to monitor Chubb's European leased lines between several European sites and a London node.

As companies become more global the need for fast, efficient communications will become essential

In addition to Mercury's role of steering Chubb through the unfamiliar waters of European telecommunications, Mr Powers calculates that opting for MDN has saved around 20 per cent annually in staff costs and office rent.

However, Mr Powers has some reservations about the concept of MDN in general. He feels that some aspects of a company's business, such as the development of a corporate telecoms strategy, are too sensitive to be left to a third party.

This "emotional hurdle" of giving up control of one's data network is widespread and could hinder growth of the MDN market. Some companies fear that third party networks may be insufficiently secure for the transmission of confidential data, though BT's Mr Cook counters that it would be far easier to tap a private line.

Management consultant KPMG Peat Marwick McLintock, which has recently completed a study on global networking, says there has been a restructuring of the MDN market over the past few years. Large telecommunications companies, such as BT with its purchase of Tymnet, are limbering up to exploit the potentially lucrative MDN market. It believes that only those companies with large global networks and "financial clout" will survive the battle for market share.

In practice, says Mr Gerry Spring, executive consultant at Peat Marwick, companies do not choose between private, public and managed networks but operate a combination of all three. In telecommunications jargon, this is known as a hybrid network.

Peat Marwick says there is a lot of money to be made in the MDN market in the short to medium term. However, beyond that, as dial-up services become more sophisticated with the spread of ISDN (integrated services digital network), both private and managed networks may lose their lustre.

Once it becomes possible to send data at speed along the public network and to dial up lines for services such as videoconferencing, Peat Marwick says, it may no longer be worthwhile investing in expensive alternatives.

All in a day's work: BT's 24-hour network management centre in San Jose

There are 15m-20m fax machines worldwide, writes **David Pilling**

A demand for fast workers with built-in memories

IT IS not so many years ago that facsimile machine salesmen were habitual cigar smokers. Technology was such that early machines took several minutes to send a single page of text and relied on burning chemicals to produce an image. Hence the cigar-smoking, which salesman used to mask the pungent aroma.

Things have come a long way. There are now an estimated 15m-20m fax machines worldwide, according to Mr Lester Davis, chairman of the British Facsimile Industry Consultative Committee which represents leading UK suppliers. Most are of the Group 3 industry standard and send an A4 sheet in seconds.

Features may include single-touch auto-dialling, multi-broadcasting facilities, ID security codes (to protect against junk fax) and document feeders.

There are 5.5m machines in the US, according to the newsletter Fax Reporter. In the UK there are an estimated 800,000-plus units, something like one for every three businesses.

Mr Jeffrey Goldberg, industry analyst at Dataquest, the high technology consultancy, says the UK market peaked in 1989-1990. This year sales have slowed and revenue may even record negative growth.

However, Mr Pete Edmondson, product development manager at Canon UK, argues that the market has been buoyed, in spite of recession, by the advent of plain paper fax machines. Until recently all faxes were printed on thermal paper, which has the disadvantage of being too flimsy to file easily, while the print tends to fade.

Plain paper faxes, using either ink-jet or laser printers, produce a much more office-friendly document. They are much in demand, especially in the US where Fax Reporter says the thermal market has stagnated.

In the UK 10 per cent of machines sold so far this year have been plain paper, compared with 4 per cent in 1990. They tend to be more expensive than their thermal roll counterparts, although the difference in price is narrowing and the paper itself is about half the cost.

The increase in the sale of plain paper machines, says Mr Davis of BFICC, mirrors the trend towards greater sophistication. "New products are lower cost and higher featured, and are forcing out the lower-end machines."

High on the list of desirable features are memory functions enabling machines to be programmed with short codes for frequently dialled numbers. Memory can be used for delayed transmission, so that messages are sent during cheap-rate periods or delivered across time zones at an appropriate hour. Some machines remember messages received when they have run out of paper and print them out when the paper tray is restocked.

There is also growing demand for faster transmission which cuts labour time and phone costs. Faster machines operate at 14,400 bits per second (bps), which manufacturers claim can transmit an A4 page in six seconds – although this does not include the period of "handshaking" when two machines make their initial connection.

There are also some Group 4 faxes which operate on ISDN (integrated services digital network) circuits at 64,000 bps, transmitting an A4 page in 3-4 seconds. In expectation of the expansion of ISDN, manufacturers are developing enhanced Group 3 machines for 64,000 bps transmission.

If speed is important, so is error-free transmission. CCITT ECM, an industry standard adopted in 1988, automatically resends corrupted sections of a message, the theory being that users can send documents safe in the knowledge that an ungarbled version will reach its destination.

More sophisticated still are subscription services such as American Telephone & Telegraph's EnhancedFAX and BT's FeatureFax which enable users to upgrade most Group 3 machines. AT&T's service allows customers to broadcast, virtually simultaneously, to as many as 10,000 fax machines, via nodes in the US, Canada, the UK, Japan and Hong Kong. Customers pays usage (recorded in an itemised billing account) and a monthly $10 subscription fee.

The service came to prominence during the Gulf war, when more than 1m messages were sent to troops in "Operation Desert Fax". The US Chamber of Commerce uses the broadcast facility to send alerts on legislative developments to its disparate members, while USA Today International transmits an overnight sports wire to enthusiasts.

Manufacturers believe there is room for growth even though some regions, such as Scandinavia, seem to have neared saturation point. They expect new markets, particularly in eastern Europe and the Far East, where a pictorial alphabet makes fax ideal.

Dataquest confirms that eastern Europe – and in particular the Soviet Union with its enormous distances – could become a region of huge growth. However, this will not take place, it says, until the region has invested heavily in improving its telecommunications network.

Dataquest has recorded most European growth in Spain and Italy where sales have "taken off" in the past two years. The total European market in 1989 (the most up-to-date figures) is estimated at $3.15bn (£1.87bn) though, because of the method of calculation, Dataquest regards this as an overestimate.

In Britain, BFICC is looking forward to a post-recession era of "arms-length fax" in which it is hoped large companies will move towards the convenience of stationing machines in every department.

As ISDN becomes more widespread, colour fax and higher-resolution transmission are likely to become increasingly important. Faxing from commercial aircraft via satellite could also become commonplace.

In the UK there are about 800,000 units, one for every three organisations

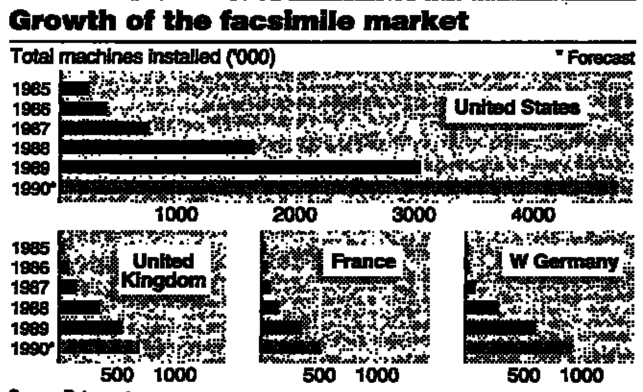
Home business fax is expanding. Small businesses are buying auto-switching phone-fax machines, which can differentiate between voice and fax and thus only require one telephone line for both functions.

In the longer term, manufacturers are eagerly awaiting a surge in the leisure market where domestic machines would be widely used for non-business applications.

Dataquest believes this is still some way off. At the moment, the only significant consumer market is in Japan, where domestic machines are so common that schoolchildren regularly fax homework to each other. Mr Goldberg believes that the cost of machines would have to fall below £150 to see rapid UK growth in this market.

Faster fax transmission cuts labour time and phone costs

Growth of the facsimile market



Source: Dataquest

VALUE-ADDED SERVICES

Leaping the barriers

MANAGERS OF international data networks have battled for years with the administrative nightmare of dealing with several different telephone network operators (PTTs). They get forms and bills in several languages and currencies, and the difficulty of matching delivery times for service on a line between two or more countries causes many a headache.

According to Mr Stuart McLean, chief operating officer of Barclays Network Services, what they want is an improved service from the carriers which takes away the administrative burden. The ideal would be a one-stop shopping service, where a single operator would carry a company's cross-border data traffic and provide connections to local offices.

Mr McLean also believes that a single bill should be provided in one currency, and that there should be one point of contact to report network faults. "Some routes today consist of 11 carriers. I want to deal only with one," he says.

In response to similar demands from large multi-national organisations worldwide, several companies, including PTTs, are setting up one-stop shopping services. However, there are some firmly entrenched barriers in the telecommunications regulations of most countries, which make it hard to get such a new concept off the ground.

Even under the most liberal telecoms regimes such as the UK, the regulations permit third parties only to offer services if they add value to the basic line provision. In other words, they must do something extra to the data, not just transfer it from point to point.

The traditional value-added network operators such as GE Information Services, the IBM Information Network or BT Tymnet, have based their business on transporting specific types of computer data, such as IBM's systems network architecture. They are also trying to build up a business in inter-company electronic messaging, especially electronic data interchange, which is designated as the future standard for basic trading documents such as orders and invoices.

A newer concept is "bandwidth broking", where the value added supplier will sell network capacity – the bandwidth – and will manage the traffic flow. This network management is sufficient to count as "value-added" and get around most regulators.

The leading bandwidth broker is Infonet, founded by the US-based Computer Sciences Corporation, and now owned by a consortium of PTTs. But the next 12 months will see the setting up of several more bandwidth broking services.

AT&T, the US telecommunications company, has been quietly building a Europe-wide network; it now has nodes in seven countries and four customers signed up. Its rival long-distance operator, US Sprint, this year won a contract to provide pan-European data services for Unilever, the household goods manufacturer. And one of the smaller US players, World Communications (World Com), a subsidiary of Swiss firm Tele Columbus, has also just taken its first steps into Europe, offering a transatlantic managed service.

There is a view that bandwidth broking will become a substantial business, and that it will evolve to encompass all aspects of network design and provision.

The third US long-distance operator, MCI, launched its global communications services at the beginning of this year. MCI will design and put together a network to any country and manage the services that run over it. It will handle all the network management and trouble shooting, while the customer receives one bill for everything.

A further development will be virtual data networks, where sophisticated data facilities are provided on dial-up public lines. The research organisation Yankee Group believes that companies will initially try the virtual network concept with their voice telephone services but in the next year or so, they will begin to use them for data as well.

If that is so, private leased lines could become a thing of the past. "If I look ahead five years, private lines as we know them today will be here but they won't be leading edge technology," says Mr Eldon Blust, a MCI director.

It is possible that hybrid networks will evolve. Private lines will be used for a company's most sensitive data, or on routes where very high volumes of traffic are regularly transmitted. But the rest of their data communications traffic may be entrusted to a value-added "bandwidth broker" or the company may sign up for a virtual service.

Companies with very large private networks will tend to be cautious.

What these customers look for is competitive pricing and high service levels. They also watch for any discrepancies between promise and practice. On the transport networks there can be considerable differences in time taken for the network to respond to a terminal. It may be very fast if only one terminal goes on line, but considerably slower if a group of terminals are logged on.

Very often too, the network operators will say they can offer service in certain places, on the assumption that if they win the contract, they will put a node in there.

As more competition arrives, they are being forced to respond to customers. The most common request today is for "bandwidth on demand" – network capacity made available in whatever quantities the customer needs, at any time that it may be needed.

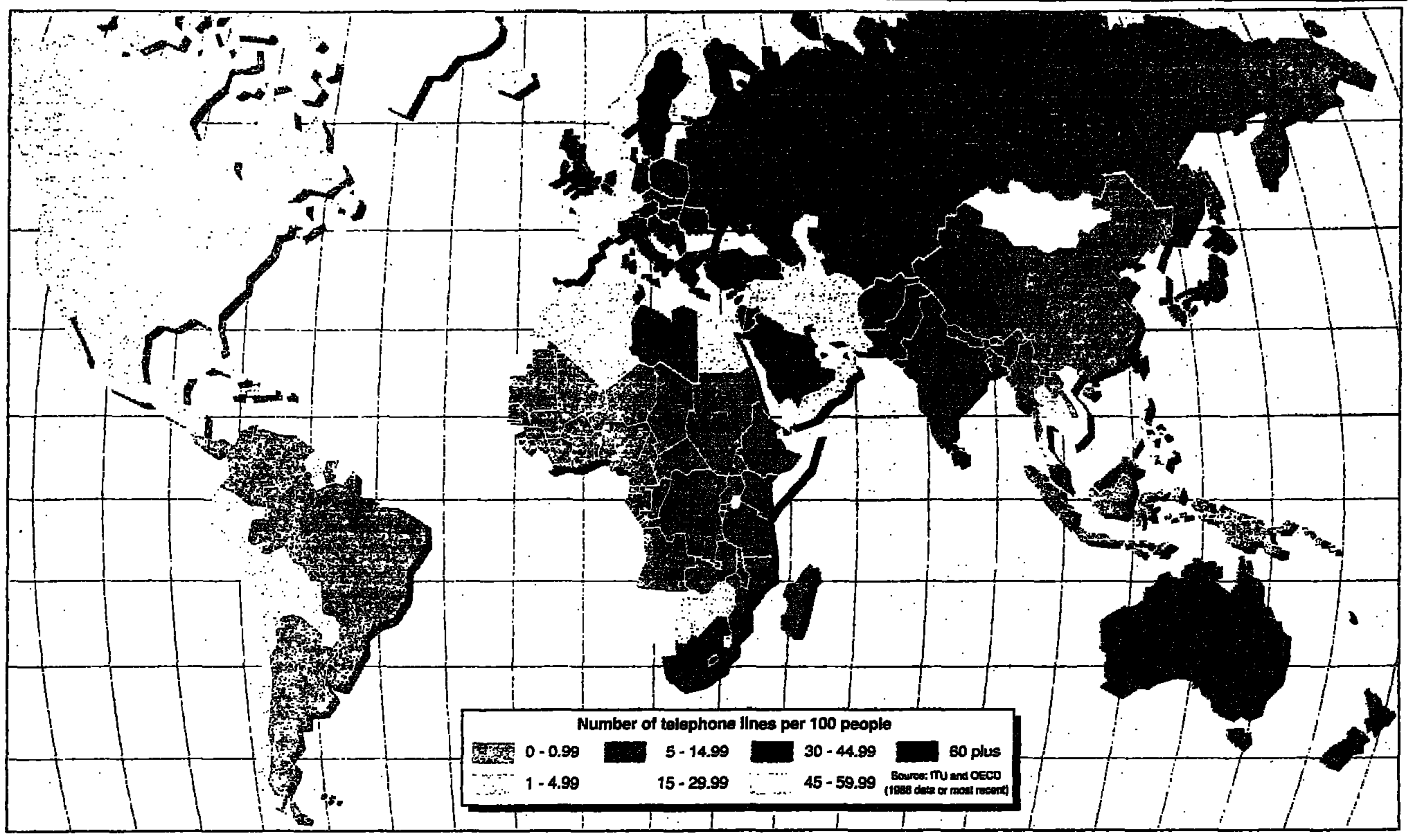
One of the attractions of a value-added or managed service is that expensive dedicated lines do not lie idle for 364 days a year, just so that the company has enough capacity to handle a surge in traffic on the remaining day. They expect that if they sign up to a third party or vitual network service, they will have the lines when they need them, and not have to pay for them, when they do not.

An extension of this concept is a user-defined network. According to Mr McLean, this is where a customer can specify regular time slots when extra capacity will be needed: "A facility you might ask for is that every Tuesday and Thursday at midnight you need a 2 Megabits a second line between A and B. A user-defined network gives you the opportunity to go in from a console and ask for those 2 Megabits."

Monica Horten

GLOBALISATION

Scramble of the titans



A KALEIDOSCOPE of acquisitions, investments and alliances is forming, which will set the pattern for global telecommunications in the late 1990s.

New consortia are taking shape, drawn from operators, users, computer vendors, equipment suppliers and new market entrants to take advantage of emerging business opportunities and to minimise financial risks.

There is little or no precedent for these ventures. Increasingly crossing national borders and industry sectors, each is being developed on an ad hoc basis. Membership is dictated by the relevant business considerations. And there is no predicting which will be successful.

At stake is the possibility of forging global leadership on two fronts. The first is in the management and operation of multinational corporate networks. The second is the expansion abroad made possible by the growing number of telephone company privatisations and the opening of specialised service sectors.

Faced with intrusion into their own national backyards the movement abroad is being led by A T&T, BT (formerly British Telecom), Cable & Wireless, and US Sprint. As they attempt to meet the demand for end-to-end service delivery from multinational customers and increase revenue by entering high growth markets overseas, the new wisdom is to think global and act local.

Even among the major players there is still considerable confusion over what the core diversification strategy should be. The spectacle is one of industry giants scrambling after every emerging opportunity in the $320bn telecommunications services market, without a clear idea of how each move fits into the final picture.

Smaller players are being left to ponder whether they must make their move now or wait until the market settles.

As the more dominant telecommunications carriers develop competitive tariff structures and begin to build intelligence into their networks, one outcome may be the rise of the "super-carrier", as the likes of BT, A T&T, NTT, Deutsche Telekom and France Telecom begin to wage the real battle above the heads of their smaller rivals and private service providers.

In such circumstances, second tier operators such as Belgium's RTT or the Netherlands' PTT might be forced to stay at home to seek growth in new value added service and mobile communications markets, protected from real competition by national regulation.

Likewise, they risk being sidelined in the already intense race among the major carriers for control of the transoceanic fibre optic conduits that will form the backbone of tomorrow's global communications infrastructure. As communications capacity becomes a commodity, carriers are positioning for the time when the economics of overcapacity force a shake-out in the market. Led by A T&T, the established carriers plan five more transatlantic cables by 1996, in addition to the two existing cables TAT-8 and PTAT. With a similar situation developing on transpacific routes, this will almost certainly preclude the development of further private sector projects.

On land an equally intense battle is shaping up as the competitive market structure for long distance operations established in the US, UK, and Japan is replicated in countries such as Australia, Canada, Finland, New Zealand and Sweden. And in Europe, the Hermes consortium established between private sector interests and 11 national railway companies to build a pan-European long distance network is set to challenge the regulatory status quo.

All these competitive networks are restrictive regulation governing the delivery of international services and on the resale of third-party traffic. Once these are lifted, entry by the likes of IBM, DEC, EDS, GEIS, and new niche players can also be expected.

Overall, the new era is one of complex promiscuous relationships. Although it is still uncertain whether this will result in generalised competition between long standing international operators or a mix of partnership and competition, co-operation is likely to be on a bilateral basis rather than the multilateral correspondent relations common until now.

BT has already led the way in breaking up the club of national operators by acquiring US company Tymnet's global data operations. Last month it established Syncordia, based in Atlanta, Georgia, which aims to take over the running of multinationals' internal networks. A T&T and France Telecom have also now broken ranks with their forays into the UK, through their respective acquisitions of Istel and part of the old London Transport network. Other neighbouring markets are expected to follow as targets.

As international competitors, increasingly attempting to penetrate each other's markets and struggling for the same private leased line traffic, the leading carriers have an incentive to invade each other's patches.

This makes for a very uncertain future for such ventures as Infonet, a jointly owned company between MCI and eight other national telephone companies. The situation is further complicated by the fact that almost all companies are still developing their international strategies. BT and A T&T are testing the market for global network management through their various acquisitions and alliances, but the synergies provided by BT's $1.4bn investment in McCaw Cellular Communications, the leading US mobile group, or A T&T's attempt to combine the roles of service provider and equipment supplier, are not immediately obvious.

In the same way, while building its global digital highway and competing as an alternative carrier in the UK and US, Cable & Wireless is in the meantime heavily dependent on its monopoly franchises in Hong Kong and other former colonial territories. And US Sprint, joint owner of the private transatlantic cable PTAT with C&W, may soon find itself competing directly with its erstwhile partner through joint venture projects with British Waterways and Hermes.

Over the longer term, a major question mark is whether the traditional telephone companies with their legacy of monopoly organisation can effect the necessary cultural changes to compete on a global scale.

This uncertainty extends to their ability to make sensible investment decisions overseas. In particular, the commercial justification of investments by

Continued on Page 22

Cross-border acquisitions

Year	Number of deals	Value (US$m)
1985	5	399.0
1986	7	132.0
1987	7	63.0
1988	11	116.5
1989	50	2,694.1
1990	67	16,539.0

Notes: Number of deals refers to all, while value of deals includes only the deals the value of which were announced; The high value of the cross-border acquisitions in 1990 is due to privatisations which occurred in that year (US$9.9bn); investments by foreign companies in the US represents only 2.8 per cent of the value of the cross-border deals in 1990

Source: Booz, Allen & Hamilton

Profile: A T &T

Pace of expansion overseas quickens

A T& T, the largest US long distance telephone carrier, is expanding overseas at an extremely rapid rate. The aim, says Mr Robert Allen, the chairman, is to "make A T& T a truly global company".

International revenues accounted for only 8 per cent of A T& T's total in 1984, when the company was broken up in settlement of an anti-trust case and saw its local services spun off. By last year, they comprised 15 per cent of the total and the group's impending takeover of NCR, the computer manufacturer, will raise the

At present, its largest source of international revenues is international long-distance calling

tally to about 22 per cent. Mr Allen's goal is about 25 per cent by 1995 and 50 per cent for the long term. "We expect to see an evolution in the world market that will result in just a handful of large, global, information technology companies, and we intend to be one of them," he says.

A T& T actually had a sizeable overseas presence in the last century, beginning with a plant in Antwerp, Belgium, which it opened in the 1880s. In 1925, A T& T sold its overseas telephone manufacturing operations to ITT, so that it could concentrate on the US market, although it has always provided an international long-distance calling service.

It began to re-enter the international arena in the late 1970s and made foreign activities an important part of its strategy in the early 1980s, driven both by technological change and the impending break-up of the US business. It employed fewer than 100 people outside the US in the first half of the 1980s, compared to 22,000 now and nearly 50,000 once the NCR deal is consummated.

Mr Allen admits A T& T spent much of the 1980s finding its way around the international market place. For example, a much vaunted global computer alliance with Olivetti ended unsuccessfully in 1989, with the Italian side critical of A T& T's marketing skills.

However, the pace has been quickening in the past few years, and A T& T brings some formidable strengths to the international arena, including the research capabilities of its Bell Laboratories; its position as the leading company in the US long-distance service market; and its pre-eminence in the US equipment market.

At present, its largest source of international revenues is international long-distance calling, a market growing at 15 per cent a year. However, the company expects sales of network telecommunications equipment will eventually supersede that source of revenue.

The group sold more than $1.5bn of equipment overseas last year, up from $1bn in 1989, and it wants to attain at least $4bn by 1995. Mr Allen says that, during the next 10 years, the world will spend more money on network equipment than it spent in the previous 115 years since Bell invented the telephone. A T& T is being asked to bid on projects that were formerly captive markets for local suppliers.

It also has the status of a local supplier in many countries, with more than 30 manufacturing and technical centres in Europe, Asia and Latin America. Mr Sam Willcoxon, who heads international operations, says that: "As our business continues to expand around the globe, you will see our manufacturing capability expand accordingly." The group also has some 25 strategic partnerships and alliances overseas.

The acquisition of NCR, which receives 62 per cent of its revenues from overseas, is intended to improve A T& T's lacklustre performance in the computer market. Mr Allen's aim is to make networked computing, a rapidly expanding sector, a core A T& T business. Wall Street has yet to be convinced that putting the two computer companies together will turn the A T& T business around.

The group does not seem to be restricting its expansion to any one market. Mr Willcoxon says it will be growing in Europe and Asia, adding that Mexico and Latin America also offer significant opportunities.

Unlike the US's regional Bell telephone companies, A T& T has not taken advantage of the privatisation movement in the global telecommunications market to pick up stakes in foreign telecoms operators.

Mr Willcoxon says that the group would not rule out such a move, but would want any involvement to maintain its focus on the long-distance and international markets, whereas most of the privatisations are of integrated local and long-distance services.

Martin Dickson

Profile: NIPPON TELEGRAPH AND TELEPHONE CORPORATION

International aspirations

NIPPON Telegraph and Telephone Corporation (NTT), struggling to maintain a competitive edge in its domestic market following privatisation in 1985, is anxious to become a provider of profitable foreign and domestic telecommunications services.

However, these ambitions are aggravating an already tense stand-off with Japan's Ministry of Posts and Telecommunications (MPT), which supervises NTT. The ministry has overseen the spin-off of NTT's mobile communications operations into a separate company, and is calling for NTT's local services to be broken up into nine regional companies, ostensibly to bring Japanese customers the benefits of enhanced competition. NTT wants only a two-way split, between local and long-distance services, and views such overtures as a ploy by the ministry to increase its leverage over the telecommunications industry as a whole.

NTT's impatience to enter overseas business fields stems partly from its conviction that provision of international telecommunications services to the globally-oriented business community offers one of the best guarantees of long-term profitability. It is also convinced that failure to act promptly will jeopardise Japan's chances of establishing itself as a fifth global telecommunications services provider, alongside Britain, France, Germany and the US.

However, in its quest for a broader international role, NTT's position is weakened by its poor track record at home. Since privatisation, its share price (first listed in February 1987) has fallen dramatically to a quarter of the peak of Y3.18m. NTT has been repeatedly upstaged by local competitors in offering new services and rate cuts to domestic users. Despite cuts pn some routes, long-distance charges remain relatively high; they average 24 times the cost of local calls, compared with three times the cost of a local call in Britain.

NTT's identity crisis was again brought into the open last July when, during a visit to Singapore, NTT president Mr Masashi Kojima said NTT now considers itself ready to undertake full-scale ventures in overseas markets. He had earlier stated he considered it essential that NTT move into global business activities within one or two years.

Mr Kojima's statement evoked an immediate rejoinder from the director of MPT's Telecommunications Bureau, Mr Tetsuo Morimoto. He suggested that NTT's business in foreign countries should be restricted, and offered a reminder that in Japan, international and domestic telecommunications business are separated by law. Mr Morimoto added that it remains unclear whether NTT has the support of Japanese users, which pay it fees, for the use of these funds in foreign operations.

NTT has subsidiaries in the UK, Europe, Brazil and the US (east and west coast divisions), and overseas representative offices in six other countries, principally in south-east Asia. NTT described the function of its newest subsidiary – opened in Düsseldorf last June – as "a base to strengthen NTT's co-operative business-orientated relationship with Germany and Europe" and a "liaison and base from which to expand international procurement and technical co-operation operations".

Ten newly-industrialising or developing countries – including several south-east Asian nations, Mexico and Brazil – are said to have asked NTT for assistance in establishing national telephone companies and international networks.

NTT spokesman, Mr Yoshimasa Hashimoto, says the company is regularly approached by trade and manufacturing companies in Japan and overseas seeking assistance in setting up their own global networks. NTT has talked to BT about establishing a new joint-venture company, called Syncordia, which would provide the maintenance required by these networks and eventually sell related services to users on a "one-stop shopping" basis. But it has not yet committed itself to this.

"We have little experience of international business, so it's a big challenge for us", says Mr Hashimoto, "but this is a critical time to enter the global market. However, it remains very important that these projects are shown to contribute to Japan's domestic market."

Despite the MPT's apparent intransigence over NTT's international aspirations, recommendations from a senior MPT advisory council last July seemed to indicate that the ministry is hedging its bets. The council stated that foreign ownership of NTT shares (currently banned by the government on national security grounds) should be permitted, up to a maximum of 20 per cent, in order to broaden NTT's financial base and allow it to gain a strategic stake in foreign companies. The fear was also expressed that NTT's closed ownership could lead foreign countries to oppose future expansion.

Roy Garner

Profile: BT

Keener than ever to play on a world stage

THE track record of BT (formerly British Telecom) as a global telecommunications player is not one that it would choose to boast about.

Many of the companies that it has bought overseas are either up for sale, losing money or have already been wound up.

At the same time BT has met with little success in its attempts to win licences to operate new services abroad. And it has not even bid for the former state telephone monopolies that governments in some of the developing companies have been seeking to privatise.

But it takes more than a few million pounds of misguided investments to dampen the spirits of a company which will record pretax profits in excess of £3bn this year. BT is keener than ever to become a global communications player and claims to have learned some important lessons from its past mistakes. In its submission to the Office of Telecommunications and the Department of Trade and Industry as part of the duopoly review last year, BT said its mission was "to be the most successful telecommunications operator in the world by satisfying customers worldwide".

Emphasis is put on providing the largest companies with the highest quality and a wide range of services

Mr Iain Vallance, the chairman, aims to make BT one of only a handful of truly global telecommunications operators. He is already wooing partners and customers worldwide in an attempt to fulfil his dream.

In BT's new global vision, the ownership of overseas companies is not vital. Instead, emphasis is put on providing the world's largest companies with the highest quality and the widest range of telecommunications services available, backed up with network management and customer service facilities anywhere in the world.

The BT strategy requires a presence in those countries where these multinational corporations are likely to be based - western Europe, the US, Japan and, to a lesser extent, Hong Kong and Singapore.

But few of these countries allow foreign companies to own and operate networks meaning that companies like BT have to forge partnerships with other operators.

Over the last two years, such alliances have proliferated. BT partners the US and Japanese giants, AT&T and Kokusai Denshin Denwa in one of the alliances, while BT is in negotiations with Deutsche Telekom and Nippon Telephone and Telegraph with a view to their joining the recently launched more ambitious Syncordia project.

BT's current philosophy marks a radical change in thinking from that which led to the purchase of a 51 per cent stake in Mitel, the Canadian telecommunications equipment manufacturer, in 1986 – the company's first significant overseas diversification after privatisation.

In those days, BT backed the theory that computing and telecommunications would merge into a ubiquitous information technology industry. Mitel was primarily a supplier of company telephone exchanges, but BT had also been attracted by the company's microchip innovations underpinning that success.

Subsequently, however, BT decided that its future lay in services and not diversification into new areas such as manufacturing.

BT's mission is 'to be the most successful telecommunications operator in the world by satisfying customers worldwide'

And so its Canadian acquisition was put up for sale last January. Mitel has not even been useful from a financial point of view. Its profits have slumped over the last two years and that BT is unable to find a buyer.

The purchase of stakes in two US mobile communications operators, Metrocast and McCaw Cellular in 1988 and 1989 respectively, fitted in with the new BT strategy.

Metrocast was a nationwide paging operator, promising to find an important niche in what was until then only a regional service, while McCaw Cellular was in the process of becoming the largest cellular telephone operator in the United States.

The promise of Metrocast was never fulfilled. What had looked like a gap in the market did not materialise, and BT decided to wind the company up last June after failing to find a buyer. It lost about $50m as a result of buying an 80 per cent stake in the venture.

A 22 per cent stake in McCaw Cellular, a far bigger venture, cost BT $1.5bn BT happened to buy when cellular stocks in the United States were at their peak, and shares in McCaw are now trading at only half the level at the time of the purchase. Meanwhile, McCaw itself, which had total debts amounting to $1.8bn at the time of the BT purchase now has liabilities of $5.4bn.

Part of the rationale behind BT's purchase of the stake in McCaw Cellular was based on the fact that cellular communications is one of the most dynamic sectors of the telecommunications industry and also the assumption that experience gained in the US would be invaluble in other markets. However, if BT thought that involvement in McCaw would help it to win licences to operate cellular networks in other markets, it was mistaken.

BT has been involved in several international consortia bidding for such licences, but its only success to date has been in Japan.

It was obtained in June when a consortium in which BT has a five per cent stake won a contract to operate a digital network in the Tokyo region.

The one overseas investment that has come up trumps for BT is Tymnet, the value-added data services company that BT bought from McDonald Douglas for $355m in August 1989, shortly after the McCaw deal. Unlike BT's other acquisitions, Tymnet has been incorporated into BT's mainline business and is being used as the vehicle through which BT markets a sophisticated range of new data communications for its large customers.

In spite of its poor record overseas, BT is still treated with respect by other telecommunications operators

In spite of its poor record overseas, BT is still treated with respect by other telecommunications operators aspiring to be global players.

Projects such as Syncordia illustrate that BT is at the forefront of the race to develop global network capabilities. But doubts over its ability to build an international network persist. BT still has to prove that it has learnt from its Mitel and Metrocast days.

Mark Newman

Ferry service: a BT telephone exchange on its way to Lamu island off the coast of Kenya

Finishing line: engineers complete work at a Kenya hospital

Titans scramble

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France Telecom, Spain's Telefonica the US regional Bell operating companies among others, in telephone company privatisations in Asia, Latin America and eastern Europe remains unproven.

The same is probably true of the satellite and mobile communications licences emerging in eastern Europe and elsewhere, or the moves by the US Regional Bell Operating Companies into cable television in the UK.

The opportunities afforded by growing regulatory liberalisation, the acceptance of multiple service carriers, the opening of specialised service sectors, and telephone company privatisation are unlikely to diminish.

Telecommunications services are now firmly established as a strategic diversification target worldwide. But it is difficult to predict who the winning combinations will be. The ability to co-operate and compete simultaneously with the same players has become a necessary art in international telecommunications.

The expansion of international trade, the geographical dispersion of company activities and the extension of telephone company operations worldwide have now made telecommunications a truly global business.

But the most worrying aspect of the process must be that it has not meant any narrowing of the gap between the industrialised countries and the the developing world. If anything it has tended to widen.

Denis Gilhooly

Profile: CABLE AND WIRELESS

Blueprint for a global digital highway

SINCE Cable and Wireless launched its global strategy in the mid 80s, international telephony has been growing by around 20 per cent a year. According to a recent report by the International Institute of Communications there has been a sixfold increase in international telephony to 35bn minutes in 1991.

Set against these figures C&W's decision to pursue an international global strategy was described by one analyst as "nothing short of brilliant". Yet, in many ways, it is not so much brilliant but a simple decision to revert to its past strengths.

At the beginning of the 20th century the company could claim to be the world's international telecommunications company, serving the outposts of the British empire when the bulk of international traffic went through London. It so irritated C&W's emerging competitors, such as AT&T, the US telecommunications company, that new international rules were established. These prevented a single international carrier from delivering a message by itself, thereby breaking C&W's monopoly on international traffic.

While losing its premier position as an international carrier, C&W kept hold of its international monopoly in Hong Kong, while retaining markets, mainly in former British colonies, such as the Caribbean and parts of the Middle East and Africa.

However, when the company was privatised in 1981 it found itself in something of a dilemma. How could it justify pumping hundreds of millions of dollars of investment in some of its international businesses, such as the West Indies for example, if it was not linked to other business centres of the world also serviced by C&W?

To overcome this problem it launched its international strategy with the aim of building a "global digital highway". A network of fibre-optic cables would link C&W's main business centres of the world. To achieve this goal C&W set about boosting its own international business in strategic centres across the globe. This included the following moves;

■ The launch of Mercury Communications in 1984 – when it became a public telecommunications operator – as part of the duopoly with BT. By the end of last year C&W had invested £1.4bn in the network. C&W believes the outcome of last year's duopoly review, allowing new competitors into the UK telecommunications market, justified its decision to spend £500m a year for the next three years to boost Mercury's share of the market. It has 15 per cent of the UK international traffic and a greater share of private networks.

It recently bought the minority holding in Motorola, the company's partners in Mercury Personal Communications. Subsequently, C&W entered into an agreement with Unitel, one of the other two PCN licence holders, for a capital investment and cost sharing agreement.

■ A significant push into the Japanese market by taking a 17 per cent share in IDC, one of the three big Japanese operators. The formation of Fair-way networks, a joint venture between C&W and Toyo Information Systems, took C&W into Japan's domestic market for the first time. Fair-way, a data and fax network, can lease circuits from IDC for the delivery of value-added services, while IDC can use Fair-way to complete its own connections. This gives C&W a stake in both types of carrier allowed under Japanese regulation.

■ The build-up of C&W's presence in the US, culminating in this year's agreement to acquire TRT/FTC, a US domestic and international carrier, for around $174m. This makes C&W the fourth largest long-distance player in the US. TRT/FTC has direct links to many overseas countries including the UK, Japan, France and Germany through its international cable and satellite networks.

Trunk call: a C&W telephone being used in the Seychelles

At the beginning of the 20th century the company could claim to be the world's international telecommunications company, serving the outposts of the British empire

Lord Young, C&W chairman, in a recent speech to the Financial Times Telecommunications conference, said: "A fundamental part of our European strategy is to see these services not just as a common offering across the continent, but as a part of our global approach to unifed services and networks."

C&W has deliberately built up its presence in the leading business markets to link them by way of its Global Digital Highway. Its global strategy has been funded, in part, by the sale of part of its shareholding in Hong Kong Telecom to Citic, the industrial investment arm of the Chinese government. This has raised the cash – $800m – needed to pursue its global strategy. (It has also helped cement good relations with the Chinese government – crucial for a company with such a large stake in Hong Kong's future.)

The global strategy has enabled C&W to justify its investment in its markets around the world. In Jamaica, for example, the company is in the middle of a $500m investment programme, introducing optic-fibre networks and digital exchanges across Jamaica. By 1994/5 the company aims to have installed 250,000 lines serving 420,000 telephones.

However, while Lord Young, who took over as chairman this year, is an enthusiastic supporter of the global strategy, he has also been pursuing one of his own. It mainly involves refocusing the present international strategy to avoid a head-on clash with some of C&W's biggest competitors, such AT&T and BT. He is also keen to inject more marketing flair into all levels of the organisation.

Mr Jonathan Solomon, C&W's director of corporation business development, explained the refocusing as breaking into the telecommunication world of the have-nots. He said: "The 15 major OECD countries represent the telecommunication haves. But what should not be forgotten is that in the telecommunication world of the have-nots, where 4.5bn people are still without phones, there is a potential for vast growth." Thus C&W has been pursuing opportunities in eastern Europe, particularly in Poland, Hungary and the USSR, and in Latin America.

It has helped cement good relations with the Chinese government – crucial for a company with a large stake in Hong Kong

Finally, it is also attempting to establish niche positions in three markets.

First, it has set up a special group to seek out mobile communication opportunites across the world.

Second, Mr Colin Bell, who was previously in charge of AT&T's UK operations, was recruited to run C&W's data communications. He hopes to unify the company's data communications across the globe with plans to extend into continental Europe.

Third, the planned launch of C&W's business communications strategy for multinationals, now known by the name "Planet". Building on its global digital highway, Planet will offer specific services tailored to the multinational customer. This strategy is due to be launched early next year.

Roland Rudd

FASTEST GROWING INTERNATIONAL CARRIERS

Carrier	1990 outgoing MITT*	1986 outgoing MITT	Cumulative growth 1986-90 (%)
US Sprint	338	43	686
MCI	772	103	649
Comm Auth Thailand	134	20	570
Cable & Wireless	1,064	160	565
Embratel (Brazil)	157	53	196
Bezeq (Israel)	116	41	167
OTC	620	239	159
Teleglobe Canada	565	223	153
China PTT	460	190	142
KDD	764	319	139
United Arab Emirates	248	120	107
Singapore Telecoms	186	99	88
Telefonica	611	330	85
France Telecom	1,921	1,095	75
AT&T	4,380	2,492	75
Austrian PTT	559	321	74
DBP Telekom	3,146	1,977	59
Korea Telecom	188	131	44

* MITT is Minutes of Telecommunication Traffic. Data are for public telephone circuits only. C&W data are for Hong Kong and Mercury Communications excluding UK-Ireland route. AT&T, MCI and US Sprint are for traffic from the continental US excluding traffic to Mexico and Canada. The table excludes the new Japanese carriers IDC and ITJ, which only began service in 1989. Singapore data are for 1986-1989. Korea Telecom, Telefonica and China PTT data are for 1988-1990

Source: International Institute of Communications

Telecommunication traffic balance for selected countries (1990)

Country	Outgoing MITT in millions	Incoming MITT in millions	Balance of MITT	(Deficit)/ Surplus as % of total MITT
Australia	517.7	397.7	(120.7)	(13.2)
Austria	476.3	486.8	10.5	1.1
Belgium	731	755	24	1.6
Canada	565	358	(207)	(22.4)
Denmark	362	343	(19)	(2.7)
Finland	186	213	27	6.8
France	1,921	2,91	170	4.2
Germany	2,833	2,369	(464)	(8.3)
Ireland	75	122	47	23.9
Italy	908	1,161	253	12.3
Israel	118	202	84	26.3
Japan	764	732	(32)	(4.0)
South Korea	188	350	162	30.1
Luxembourg	151	83	(68)	(29.1)
Malaysia	80	100	20	11.1
Netherlands	905	852	(53)	(3.0)
Norway	281	277	(4)	(0.7)
Portugal	126	270	144	36.4
Spain	611	653	42	3.3
Switzerland	1,356	1,016	(340)	(14.3)
Taiwan	212	302	90	17.5
Turkey	159	441	282	47.0
UK	2,252.8	2,330.3	77.5	1.7
US	5,265	2,604	(2,661)	(33.8)

MITT is Minutes of Telecommunication Traffic. Data are for international public voice circuits only. Canada figures are for Teleglobe only and exclude US and Mexico traffic. Data for Ireland are for the fiscal year April 1990 to March 1991 excluding UK-Ireland route. Taiwan data are for fiscal year ending June 1990. Japan data are for KDD only for the fiscal year ending March 1991. France data are for fiscal year ending March 1991. US data are for traffic between continental US and foreign points for AT&T, MCI, US Sprint and TRT/FTC combined and exclude traffic to Canada and Mexico. Data for UK and Australia are for the fiscal year April 1989 to March 1990. Data for Austria, Germany and Italy are for the year 1989

Source: International Institute of Communications 1991

Estimated capacity of trans-oceanic cable and satellite systems (1986-1996)

Year	Cable Voice paths	Satellite voice paths
Trans-Atlantic (North America to Europe)		
1986	22,000	78,000
1987	22,000	78,000
1988	60,000	78,000
1989	145,000	93,000
1990	145,000	283,000
1991	221,000	283,000
1992	346,000	496,000
1993	471,000	496,000
1994	471,000	540,000
1995	640,000	720,000
1996	809,000	720,000
Trans-Pacific (North America to Japan via Hawaii or Guam)		
1986	2,000	39,000
1987	21,000	39,000
1988	21,000	39,000
1989	21,000	39,000
1990	21,000	39,000
1991	106,000	27,000
1992	183,000	27,000
1993	183,000	117,000
1994	183,000	207,000
1995	183,000	207,000
1996	783,000	207,000

Estimates based on year cable/satellite facilities begin service. Estimate of cable voice paths assume that five virtual voice paths can be derived from one 64kbps digital circuit; cable estimates include circuits held in reserve for cable/satellite restoration services. Estimate of satellite voice paths based on Intelsat satellites only and Intelsat's July 1991 deployment and launch schedule; satellite estimates exclude one satellite in each region held in reserve. Satellite estimates also assume one voice path per channel until 1989 deployment of Intelsat VI series with 24,000 channels or 120,000 voice paths using Digital Code Multiplication Equipment (DCME). The Intelsat VII series, to be deployed in 1992, will have a nominal capacity of 18,000 channels or 90,000 voice paths using DCME. A small number of additional satellite voice paths in the Atlantic and Pacific likely will be available to 1996 from PanAmSat (PAS-1; OREX-2); Columbia Communications (using NASA's TDRSS system); and InterSputnik. Regional capacity estimates do not necessarily imply that full capacity is available to satisfy demand on any given bilateral route.

Source: International Institute of Communications 1991

CANADA

Difficult to hold the line on barriers

HAVING endured two months of public hearings, dozens of written submissions and a ding-dong public relations battle, Canada's telephone regulator must now take the far-reaching decision whether to throw the long-distance market open to competition.

The Canadian Radio-television and Telecommunications Commission (CRTC) is expected to deliver its verdict next spring.

But even as the CRTC considers the persuasive arguments put forward by each side, market forces are forcing fundamental changes in Canada's phone market.

Holding the line on regulatory barriers is becoming difficult. The powerful US companies are stretching their tentacles into Canada. Big business users as well as dozens of resellers, who lease private lines from the phone companies, are probing for weak spots in the regulatory wall.

The mere threat of competition has led Telecom Canada, which holds the monopoly on long-distance calls, to make deep cuts in its rates. The nine phone companies which own the bulk of Telecom Canada's shares are also making an unprecedented effort to shake off their legendary lethargy.

"We still get complaints about the arrogance of local companies," says Ms Mairi MacDonald, director of regulatory affairs for the Canadian Business Telecommunications Alliance. But, she acknowledges, "customers are getting more contact. There has definitely been a speeding up in the introduction of new services, and a reduction in prices for existing ones".

Domestic long-distance rates are now on average 50 per cent lower than they were in 1987. In a move clearly aimed at the increasingly aggressive resellers, Bell Canada, by far the biggest local phone company, plans to extend its discount WATS service for bulk users to US calls later this year.

The seminal case now before the CRTC stems from an application from Unitel Communications of Toronto to compete in the long-distance market. Formerly known as CNCP Telecommunications, Unitel is a joint venture between Canadian Pacific, the diversified railway company, and Rogers Communications, the country's biggest cable-TV operator.

Unitel's long-distance system would hook up to the telephone companies' local networks. The Unitel bid is aimed specifically at Bell, which is Telecom Canada's most powerful shareholder with a near-monopoly on local service in the key provinces of Ontario and Quebec. Bell also owns a slice of four utilities in other parts of the country.

The CRTC's thinking can at this stage only be guessed at.

US companies are stretching their tentacles into Canada

Mr Wayne Chen of Transition Group, a Toronto telecommunications consultancy, says his impression is that "the momentum in the beginning seemed to be with Unitel. But there's been a shift in Bell's favour".

The commission would find it much easier to throw open the doors to competition if long-distance calls did not heavily subsidise local service. Local calls are free in Canada, and Bell estimates the cross-subsidy at C$2bn (US$1.7bn) a year, equal to C$20 per local line each month.

The impact on local service has been a cornerstone of opposition to the Unitel bid. Bell, supported by the governments of Ontario and Quebec, predicts that competition in the long-distance market will mean higher local-service charges for 90 per cent of its customers.

Unitel has agreed to make a contribution to local service from its long-distance revenues, but wants a discount on its local-rate subsidy for the first five years. Furthermore, it refuses to pay modification costs for connecting its facilities to the existing long-distance network.

Mr Raymond Cyr, chairman of Bell's parent company, BCE Inc, scoffed earlier this year: "What is proposed here is not competition, it is a regulated duopoly with preferential treatment for (Unitel)."

The cross-subsidy between long-distance and local service is already undermining regulatory barriers and stoking the forces of competition.

In particular, it has encouraged large users to sign up with resellers, who can route long-distance calls through their leased networks at much lower rates than those offered by Telecom Canada (which operates only domestic and continental long-distance service) or Teleglobe Canada, which has the monopoly on inter-continental calls.

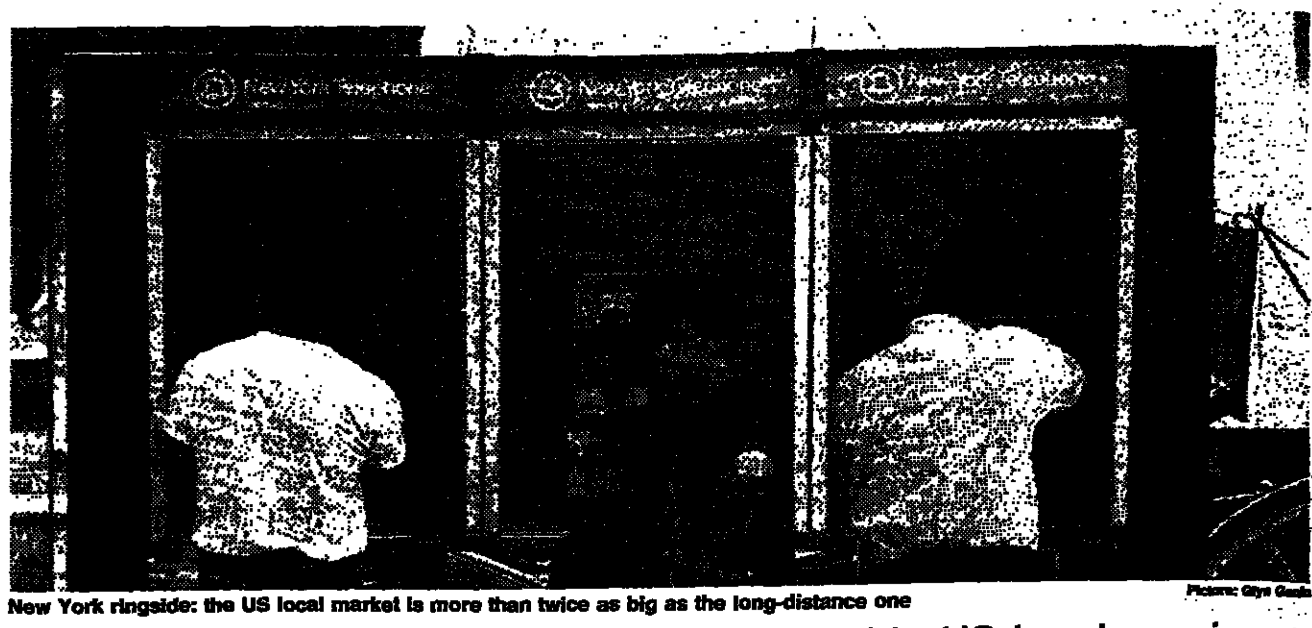
Britain's Cable & Wireless, for instance, has installed three switches in Toronto, Montreal and Vancouver. It rents local loop lines from the phone companies, and offers discounts of 20 per cent or more on their rates. C&W has signed up 2,000 long-distance customers since August 1990.

Mr Bob Watson, president of C&W's Canadian subsidiary, says that prospects for more international business are "very good", and for north-south traffic "enormous".

US utilities have also become active resellers in Canada. The Montana Power Corporation is a financial backer of VisionTel Communications of Toronto. Lightel, another Toronto-based reseller, is partly owned by Rochester Telephone of New York. It has also joined two other companies in submitting an application to the CRTC for a long-distance licence similar to the Unitel bid.

Pressure on some of the hallowed traditions of Canada's telephone system is growing. The CRTC began hearings in August to consider proposals for more flexible pricing rules to enable Teleglobe to offer cheaper overseas rates. One suggestion is that Teleglobe be allowed to cut its contribution towards local-rate subsidies.

Bernard Simon



New York ringside: the US local market is more than twice as big as the long-distance one

Martin Dickson on the competition to provide US local services

Baby Bells ring the changes

THE MOST crucial issue facing the US telecommunications industry in the 1990s is almost certainly the future of the monopolistic local telephone network dominated by the seven "Baby Bell" companies.

Competition swept through the US long-distance market in the 1980s, with a big increase in consumer choice and an equally impressive reduction in calling rates. Now similar forces are nibbling away at the local market, which is more than twice as big as the long distance one, with revenues approaching $100bn a year.

The "Baby Bells" – or Regional Bell Operating Companies (RBOCs) as they are formally known – were created through the court-ordered break-up in 1984 of American Telephone & Telegraph.

Underlying the break-up was the belief that while competition could thrive in the long-distance market, where A T & T now competes with numerous rivals, the local telephone market had the characteristics of a natural monopoly.

The local market therefore needed to be insulated so the monopolists could not unfairly subsidise other activities through local profits, and it had to remain heavily regulated.

The break-up carved seven regional Bell companies out of A T & T. They dominate the provision of local services, although in many parts of the country these are provided by independent companies, most notably GTE.

The break-up also prevented the Baby Bells from entering three related industries – the long-distance market, information services and equipment manufacturing.

Competition swept through the US long-distance market in the 1980s, with a big increase in consumer choice

Now, however, the break-up provisions, and the assumptions behind them, are beginning to break down. On the one hand, the Bells are challenging – and seem likely to be at least partially successful – the bans on them operating in the equipment and information fields.

On the other hand, their local monopolies are also beginning to fray at the edges, albeit slowly for they still account for about 99 per cent of local traffic.

In short, the future of the local companies, and the systems they operate, is in flux as never before, and this could produce both big winners and big losers, depending on the relative strength and vision of corporate managements in grasping new opportunities.

Until recently the regional telephone utilities had a relatively easy life collecting monthly fees for local telephone services and big commissions for linking up calls via long-distance carriers to local end-users. But now that is under challenge from:

- So-called "by-pass" operators, such as New York's Teleport Communications and Chicago's Metropolitan Fiber Systems, which link business users with long distance carriers via fibre optic cables, by-passing the local telecommunications companies. In an important case last year, Teleport won the right to link its fibre optic lines into New York Telephone's central switching office.
- New wireless technologies, such as cellular telephone and Personal Communications Networks (PCNs), which promise to take much business away from the traditional wireline operators. That said, the local wireline companies also have substantial cellular interests, having been automatically given one of the two cellular licences handed out in their home territories. Some have also expanded aggressively into other parts of the US.
- Cable television operators, worried about the possible incursion of the telephone companies into their area with the increased use of fibre optics, are installing their own fibre lines and experimenting with telephone traffic.
- The local telephone operators themselves have been engaging in turf wars at the margins of their territory. In one important case, the Federal Communications Commission gave Southwestern Bell the right to link up a business customer in an area served by a GTE subsidiary.

Many of these challenges stem essentially from technological change, but critics claim the local monopolists have generally been slow to adapt to market changes. The Bell companies, in particular, are accused of using their telephone operations as a cash cow to fund expensive and far from lucrative forays into other businesses, and acting as slow-moving public utilities rather than displaying entrepreneurial dynamism.

The Bell companies reply that they are seriously hampered by regulators who, in their drive to ensure a universal telephone service at an affordable cost, have forced them to subsidise rural and residential customers at the expense of urban and business ones. The "by-passers", they argue, are simply " top skimming" their most lucrative business.

These complaints have some merit, although regulators have been moving aggressively over the past few years to improve the system governing local rates. Traditionally, this was fixed on a rate of return basis, which gave the utilities little incentive to improve their performance.

As the local companies find their monopolies under threat, so they are seeking to expand into other areas

Now, many states have moved to an "incentive" based regulation which allows companies to retain part of the profit they make from any cost saving. At the national level, the Federal Communications Commission, which sets the inter-state element of local company rates, has also implemented an incentive-based programme.

The move is likely to encourage considerable rationalisation and mergers as companies see the benefits of cost-cutting.

A prime example of this was the merger, earlier this year, of GTE and Contel. This was the largest merger yet in the US industry, made GTE the largest local telecoms company in the country and underlined its position as the only local company with a spread of interests across the nation.

As the local companies find their monopolies under threat, so they are seeking to expand into other areas, and one of the most crucial battles they are likely to face over the next few years is for the right to enter the cable television field, from which they are currently barred.

A court ruling in July is likely to allow the Baby Bells into information service fields such as home banking.

Some analysts believe they and independents like GTE will eventually be allowed to offer television programming via fibre optic cables which are expected to compete increasingly with traditional copper wire technology for linking up residential phones.

Indeed, Pacific Bell, a West coast company, this summer became the first US phone business to take a bet on fibre-optics for residential phone services by replacing the old technology with the new in experiments in two communities.

WHEN the Avon Lady goes knocking on the front doors of suburban US homes this autumn, she will be selling more than cosmetics. She will also be trying to persuade customers to sign up for the long-distance telephone services of MCI, the second-largest US long-distance carrier.

MCI believes a recent deal with Avon could prove an effective means of getting its message across to the domestic consumer. "They (Avon) are a very family-oriented, relationship sell", says Mr Daniel Akerson, MCI's executive vice-president, who adds that a similar deal with Amway, the door-to-door cleaning products business, now brings in $200m of business a year. "To be a competitor in this business," he says, "you've got to try crazy ideas."

This is just one example of the fierce competition which has characterised the US long-distance market since the break-up of the Bell system in 1984, when AT & T's local telephone operations were separated from the long-distance business and additional competition was injected into the latter market.

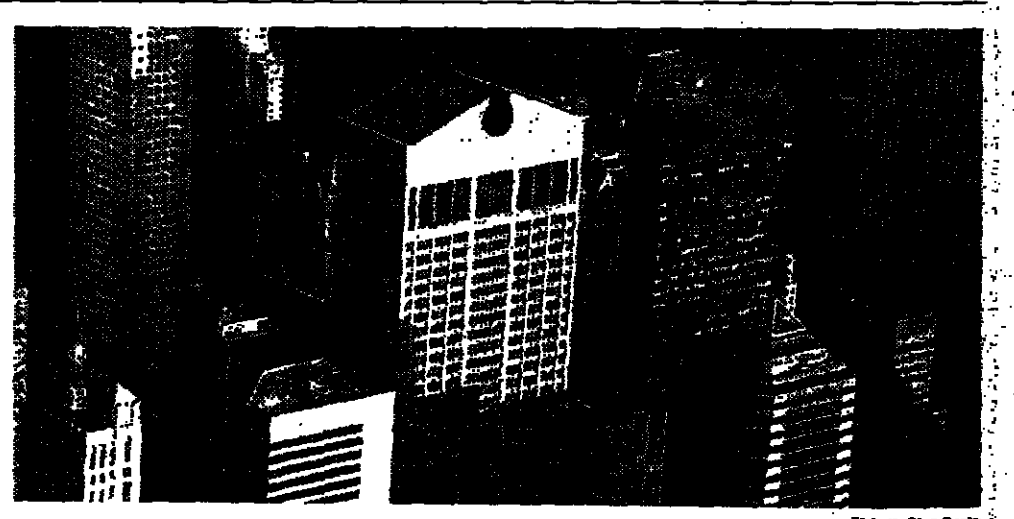
Over the past year, competition has also manifested itself in an advertising war between AT & T and its rivals to woo domestic consumers, as well as in complaints by AT & T that some opponents have "slammed" consumers – in other words, enrolled them as subscribers to their services without first gaining the customer's explicit agreement.

The door was opened to competition in the late 1960s when the Federal Communications Commission (FCC) authorised MCI, then a tiny company, to build a microwave radio circuit from St Louis to Chicago and challenge AT & T for business between the two cities. Independents made gradual inroads into AT & T's business over the subsequent decade and a half – helped particularly by MCI's victory in a landmark 1978 court case. But by the time of the break-up in 1984, AT & T remained the dominant carrier, with some 90 per cent of the long distance market.

However, intensified competition has sharply eroded AT & T's position. In 1990, it held 65 per cent of the market, according to FCC statistics, while MCI's share has grown from 4.5 per cent in 1984 to 14.2 per cent in 1990. US Sprint, the third-largest long-distance carrier, has risen from 2.7 per cent to 9.7 per cent.

Mr Robert Allen, AT & T's chairman, says one of the company's key goals is to stop this market share erosion, and claims that in recent months this has been virtually achieved in every part of the domestic market.

This competitive environment, coupled with technological change, has greatly benefited the customer, with increased choice, greater innovation and much cheaper prices. In 1983 the average price per minute of a call between New York and Los Angeles was 40 cents. It dropped steadily to around 19 cents in 1989, where it roughly remains now.



A T & T headquarters, New York: only a matter of time before restrictions are lifted

Avon Lady calling long-distance

At the same time, the market has been enjoying strong volume growth, particularly among business customers and in international calls. Total volume is expected to grow around 8 per cent this year, due to recession, but head back up towards 12 per cent or higher as the economy revives.

Mr Victor Pelson, who heads communications services at AT & T, says high growth areas over the next few years will include international calls, inbound 800 services, work on global networks for multinational corporations, and data and messaging services. "All this represents substantial growth opportunities in this business", he adds.

But even though the US long-distance market is the most competitive telephone business in the world, it is still not a level playing field. The FCC, which oversees the industry, has to strike a careful balance between a desire to make the market as competitive as possible and the need not to let AT & T use its immense market muscle to drive fledgling rivals to the wall.

At the same time, there are structural factors which prevent companies like MCI and Sprint make as rapid advances as they might otherwise do: many local phone companies are not equipped to allow customers to use the same 800 number when they switch from one long distance supplier to another. However, last August the FCC mandated the local companies to introduce so-called "800 portability" by early 1993.

AT & T still remains subject to FCC regulation in a way its rivals are not, although the commission did move in August to relax some of the more important price and timing constraints on its ability to tailor services to business customers. Analysts believe it is only a matter of time before virtually all restrictions on AT & T are relaxed. "I think we're moving down that path," says AT & T's Mr Pelson. "I think that the consumer, residential part will be the last to go, because the commission is very sensitive to that."

Moves in this direction could make life harder for some of the sector's smaller competitors, as could the possible phasing out of "equal access charges". An important element of the 1984 break-up was a provision that until September 1991 local telephone companies charge all long-distance carriers the same amount to connect to the local network.

Access charges represent some 40 to 50 per cent of the price of a long-distance call and getting rid of them would be a big help to AT & T, and ultimately the consumer, for the giant could use its muscle to negotiate big discounts with the local companies, saving it an estimated $400m to $500m a year. The FCC has told the local companies to continue the present system while it studies the matter.

In a market which has high entry barriers, because of the cost of setting up a network, but relatively low variable costs, a crucial ingredient of financial success is maintaining high traffic volume. to attract that traffic companies need, in what is essentially a commodity business, to differentiate their products from those of their competitors. How do they do it?

Perhaps the most important ingredient is technological innovation. AT & T for example, has spent huge sums to put an essentially all digital network into place, which improves line quality, cuts maintenance costs and allows it to respond more rapidly to customers' needs. MCI says the configuration of its network, with intelligence sited in peripheral computers rather than in its switching system, gives it greater flexibility in producing tailor-made solutions to customers' problems.

Customers are increasingly demanding special features, together with a high quality of service back-up and bills which are either specially tailored to their needs, or at least easily understood.

Price is also an important factor, with companies like MCI generally undercutting AT & T by a significant margin, normally 5 per cent to 10 per cent. However, AT & T's Mr Pelson says that "over the past couple of years our business customers have begun to place more and more emphasis on things like reliability, service, and new functions as well as price. They've begun to appreciate more and more, as this industry becomes more and more complex, that price is only one element of the equation."

Martin Dickson

Mobile phones in the US

A threat of fragmentation

THE cellular car telephone was invented in the US and the hand portable phone first became popular there. Not surprisingly, the US is still the world's largest single market for mobile phones.

By June this year there were 6.4m cellular radio subscribers in the US, according to the Cellular Telecommunications Industry Association (CTIA) in Washington – an increase of 1.1m over the figure for the previous December. And the market for phones is continuing to grow, at the rate of some 30 per cent a year.

But while Europe is trying to emulate the US market by creating a single standard for equipment for sale across the continent, so creating huge demand and pushing down consumer prices, the US looks set to fragment its previously uniform market. Under threat is an industry worth $2.9bn by 1995 for phones alone.

The problem is the next generation of cellular radio services which will use digital transmission signals and which should be in operation by 1992.

The seeds of the dispute were sown in January 1989 when the CTIA had to choose a

There are 6.4m cellular radio subscribers in the US

digital standard to replace the analogue Amps system used throughout the US. The US cellular phone companies were rapidly running out of capacity on their Amps networks and, by replacing analogue equipment with digital, they would be able to double their subscriber numbers.

The choice was between a system called TDMA (time division multiple access) and FDMA (frequency division multiple access). It was agreed that TDMA, a digital standard which is technically similar to the one adopted in Europe, was the better option.

A month later Qualcomm, a small Californian company which specialised in satellite and military technologies, proposed a third option, CDMA (code division multiple access). According to Qualcomm CDMA would enable the limited radio capacity to be used more economically than the other options – squeezing up to 20 times as many calls into a given chunk of radio spectrum as could be achieved using Amps.

The difference between the various technologies lies in the way the radio channels are allocated. The US version of TDMA, like Amps, divides the available spectrum into channels. CDMA, on the other hand, makes no attempt to give users their own channel but codes the bits from each call and slots them into spaces in the available spectrum. Each call is given a code to enable the receiving equipment to distinguish one call from another.

The dilemma now for the phone companies is whether to play safe with TDMA, which is a well-proven technology, or back the riskier CDMA. The nine players which hold most of the cards in the debate are GTE Mobile Communications, McCaw Cellular and seven of the regional Bell operating companies, which between them provide services to 80 per cent of US cellular subscribers. If several of them opt for CDMA – which looks increasingly likely – it will cause a deep rift in the market.

Qualcomm can already claim the support of three of the most significant "Baby Bells". PacTel Cellular, a division of the Californian phone company and one of the largest cellular operators, was the first to work on CDMA with Qualcomm. Nynex Mobile, from New York, and Ameritech Mobile, from Chicago, are also taking part in trials. Bell Atlantic Mobile Systems, GTE and Bell Cellular of Canada are also taking a close look at the technology.

However, manufacturers and phone companies appear to be backing both horses and continuing the expensive task of working on both standards, says John Wickens, senior vice-president in the information industry group of PA Consulting, in Princeton, New Jersey. "Everybody's keeping their fingers in every pie – that's the name of the game over here," he says.

Even the CTIA, which still strongly supports its original decision to back TDMA, has a working group studying CDMA and what it can offer.

In part to counter the claims of its opponents that CDMA is unproven, Qualcomm has started the second part of its systems validation tests, using five "cells" and 70 mobile phones in San Diego, says Irwin Jacobs, president and chief executive officer of Qualcomm. The tests were due to be completed last month, by which date the cellular phone companies were due to decide which technology to choose.

Even if phone companies play safe now, and stick to the tried and tested TDMA system, CDMA could well be adopted in the future. Bob Ratcliffe of McCaw Cellular, the first company to deploy TDMA technology, points out that although his company is firmly committed to TDMA now, it is still "parallel tracking" CDMA. The switching systems used by McCaw could be adapted for a CDMA system in future, he says.

If some cellular operators opt for CDMA while others stick to TDMA the eventual loser will be the consumer, who will have to pay higher prices and could be prevented from switching from one local service to another. (Each district has two competing cellular services, one run by the local "Baby Bell" phone company and the other by a competitor.)

If one of the two operators opts for CDMA while the other sticks to TDMA, the subscriber would need a special phone, which worked to both standards, to be able to switch from one service to the other. This could eventually result in

Under threat is an industry worth $2.9bn by 1995 for phones

a triple standard phone as equipment makers are already planning to make a dual standard phone to handle calls on Amps and ones on the the new digital standard – be it TDMA or CDMA. This is because US phone companies have to offer digital services on the same chunk of radio spectrum that they are already using for analogue service.

Not only will the need for a dual-standard phone push up prices – they will cost 25 to 30 per cent more than units operating to a single standard – but it will pose another problem for the phone companies offering cellular services.

To convert the analogue channels to digital ones the operators will have to persuade a proportion of their customers to move over from analogue to digital from the beginning of the new service, re-equipping themselves with the new phone. The most likely answer is that they will introduce special tariff packages for their largest corporate customers to persuade them to transfer to the newer services.

But, argues Jacobs, if the cellular companies can free 10 per cent of the spectrum in this way, and they adopt CDMA, they will have a digital service which can handle as many subscribers as the whole of their existing analogue services.

Della Bradshaw

International traffic base of the top 25 carriers (1990)

Carrier	Outgoing MITT[1] in millions	Country
AT&T	5,780	US
DBP Telekom	3,146	Germany
BT[2]	2,170	UK
France Telecom[2]	1,921	France
Telecom Canada	1,420	Canada
Swiss PTT	1,356	Switzerland
Cable & Wireless[2]	1,291	UK
MCI	1,132	US
Italcable/ASST	1,045	Italy
Netherlands PTT	905	Netherlands
KDD[2]	764	Japan
Belgian PTT	731	Belgium
OTC[2]	620	Australia
Swedish Telecom	615	Sweden
Telefonica	611	Spain
Saudi Comm Ministry	590	Saudi Arabia
US Sprint	577	US
Teleglobe	565	Canada
Austrian PTT	559	Austria
China PTT	460	China
Telmex	421	Mexico
Danish PTT	363	Denmark
Norwegian Telecom	281	Norway
Telecom Ireland	263	Ireland
UAE Comm Ministry	248	UAE

1 MITT is Minutes of Telecommunication Traffic. Data are for public telephone circuits only. Data for US carriers includes estimated traffic to Mexico and Canada; data for UK and Irish carriers includes UK-Irish traffic. Telecom Canada total includes US and Mexico traffic originated by nine provincial telephone companies and Telesat Canada of which 1,079m MITT was originated by Bell Canada. Cable and Wireless total includes only traffic originated by Hong Kong Telephone (729), Mercury Communications (362), Bermuda and Caribbean companies (200). For Italy, the share of Italcable is 209m MITT. 2 Data are for 1990 fiscal year (April 1990 to March 1991)

Source: International Institute of Communications 1991

Western Europe

While deregulation gathers pace, former monopolies are ready to attack

Reality of free-for-all a long way off

UNTIL the early 1980s, the supply of telecommunication terminals and services in Europe was largely confined to state-owned monopolies, or PTTs.

The exceptions were France, where lack of working capital militated against the PTT holding an extensive inventory of customer premise equipment, and Finland where, for historic reasons, municipal telephone companies furnished local services and the PTT concentrated on long distance and rural connections.

Subsequently, European PTT monopolies have been curtailed and, in some cases, substantially weakened.

The agents of change were a general political shift in the direction of market economics, advances in technology, and the reforming actions of the European Community.

Deregulation of government monopolies was prompted in many countries by the perception that customers deserved a better deal than they were obtaining through the exclusive administrations of the PTTs. It gathered momentum with the recognition that access to modern telecommunications was critical to corporate competitiveness, and that companies could, and would, relocate their offices and production centres to countries offering maximum choice.

Both considerations have strengthened the hands of organised user groups. Once largely unrepresented in the region's telecommunications forums, users now increasingly attract star billing.

On the technology front, advances in digital techniques and software opened up opportunities for non-PTT suppliers and facilitated the construction of private voice and data networks.

Meanwhile, often against the preferences of the PTTs and their sponsoring governments, the EC embarked on a legislative programme which not only equalised user options and operator obligations, but also progressively imposed market liberalisation.

As yet, though, the achievement of open markets is uneven across Europe and PTTs still dominate the scene.

The UK has travelled furthest along the liberalisation road. The supply of customer premise equipment is completely competitive. As well as a second nationwide wireline carrier, two cellular network companies and three embryonic PCN services, multiple operating licences have been awarded in the telepoint, paging, private mobile radio, cable and specialised satellite service sectors.

In March, a government White Paper ostensibly threw the market wide open for the rest of the 1990s. Trade and industry secretary Mr Peter Lilley indicated that, additional public and private operating licences would be granted unless there were specific reasons to the contrary.

However, experts caution that the reality may not quite amount to a telecommunications free-for-all. "On the surface it is open season, but there are going to be certain qualifications imposed on those who are permitted to run new services," says Mr Rodney Stewart, director of the UK's Quotient Communications consultancy. "Clearly there are going to be financial considerations because the government will want to ensure that the quality of service is maintained and that the customers' interests are protected."

'On the surface it is open season, but there are going to be certain qualifications imposed on those permitted to run new services'

Sweden has also bitten the liberalisation bullet. Alongside the PTT, two private companies have been chosen to offer digital cellular services. Next year, the PTT's wireline monopoly will be broken when Tele2, a new telephone company, offers national and international voice, data, fax and video services to corporate customers. Competitive residential telephone services will follow.

Elsewhere, while the supply of telecommunications terminal equipment has been substantially liberalised, service competition generally is limited to the mobile, data, and value added areas.

At the same time, the argument that "big is better" when competing in international markets has led some governments to strengthen the position of the national operator. In Denmark, this has produced a plan to bring five operating companies under a single concessionary umbrella.

Germany is an exception to the European rule. Having inherited a delapidated infrastructure in the east, the German PTT has seen fit to relax restrictions on internal voice and data satellite transmission in an effort to speed up modernisation.

While deregulation gathers momentum in Europe, a number of the former monopolies are going over to the attack. Their targets are both private networks and competitive service operators.

If new technology lubricated the machinery of private networking, it has also provided the established operators with some ammunition against this form of competition.

The integrated services digital network (ISDN), offering high quality voice, two-second facsimile, very fast data and video communication over public lines, is seen as a means of staunching the outflow of business to leased private lines.

Similarly, intelligent networks, in which software is used to share public circuits among many users giving each the facilities associated with exclusiveness, are designed to offer the benefits of private networking without the expense.

Action against new service operators takes several forms. BT recently unveiled a major price reduction package to woo corporate customers away from competitor Mercury.

Televerket, the Swedish PTT, is plans to introduce high capacity metropolitan services to steal the initiative from Tele2. In Germany, the private Mannesmann Mobilfunk GSM cellular consortium was forced to complain about the level of interconnect rates proposed by Deutsche Bundespost Telekom, the wireline monopoly and rival GSM operator.

Operator alliances to provide 'one-stop' international managed network services will also inhibit the growth of private telecommunication systems and, in as much as they extend an established operator's access to resources, complicate the task of service companies entering the market.

Interestingly, the EC has now drawn up guidelines to regulate co-operation between public telecommunications operators and guard against anti-competitive behaviour.

This, and other EC and national initiatives, indicate that the European telecommunications tide is running in favour of deregulation. But there is still a long way to go before the open market becomes a reality. After seven years of liberalisation in the UK, Europe's most ambitious de-regulatory experiment, the former monopoly retains more than 90% of the crucial wireline business.

John Williamson

International Editor, Telephony Magazine

UNITED KINGDOM

Pandora's box of alternatives

A UNIQUE experiment in telecommunications liberalisation is under way in the UK. Mr Peter Lilley, secretary of state for trade and industry, decided this year to open the UK telecommunications market to further competition. His white paper, presented to parliament in March, set the agenda for the creation one of the most dynamic and open telecommunications markets in the world.

Mr Lilley's grand design marked a watershed in the history of British telecommunications by ending the existing duopoly between BT and Mercury Communications. It represented the end of a decade of transition from the UK having its telecommunications services provided by a state monopoly to a position where it will match the US as one of the most liberalised markets in the world, populated by competing private sector telecommunications groups.

One of the aims of the government-inspired revolution will be to undermine the dominance of BT, which controls 95 per cent of the market. The limited competition of the duopoly, introduced eight years ago when Mercury Communications was allowed to start operations, has had only some success. Although Mercury, owned by Cable and Wireless, has captured a significant part of the UK business market, its penetration of the domestic sector has been minimal.

A Pandora's box of alternatives should now be available to businesses and consumers, if Mr Lilley's objectives are fulfilled. A host of companies – domestic and international – are expected to compete for a slice of the £13bn British telecommunications market.

Most of the early competition is likely to appear in the market for trunk services. British Rail Telecom already has a network in place along its tracks. It also wants to supply international services.

Meanwhile, British Waterways, the public utility which

One of the aims of the revolution will be to undermine the dominance of BT

runs the UK canal system, had linked up with US Sprint, the third-largest US long-distance telecoms carrier, to provide an alternative long-distance network in the UK. It hopes to set up a network along the bottom of its canals. Other potential carriers include the recently privatised water and electricity utility companies.

Creating competition in the local loop may be more difficult. The cable television companies, which are expected to create most of the early competition against BT, may find the cost of digging up the streets and laying cables prohibitive. One estimate puts their potential investment at £5bn. About 800,000 homes should have cable by 1992, according to Mr Jon Davey, director of cable at the Independent Television Commission.

Mobile telephony may, in the longer term, prove more competition against BT than cable in the local arena. Mr Lilley hopes the new digital technologies that should become available during the 1990s will prove a viable alternative to BT's local copper-wire network.

The potential for the digital mobile is considerable – but so too are the dangers. Stakes are high. About £4bn will be needed to set up Personal Communications Networks, a mass market digital system, and the next generation of cellular – known as GSM. Cellnet and Vodafone, the existing mobile operators, and the three PCN consortia are hoping to repeat the early success of cellular.

The problem is that along with the sales of the other icons of the 1980s – Porsches, champagne and the Filofax – the mobile telephone, that essential Yuppie accoutrement, is also in trouble.

Call volumes have fallen at both of the two cellular operators. And, for the first time, the companies have experienced a drop in the number of subscribers. Pre-tax profits at Cellnet, one of the cellular operators, fell by 39 per cent for the first six months to March this year. It is not clear whether the industry has run out of steam or the sector is merely suffering from recession.

The Cassandras looking for omens about the potential for disaster in mobile telephony can point to the telepoint fiasco. Telepoint has so far been full of sound and fury, signifying nothing but financial loss. Trumpeted as a mass market mobile system, likely to win 13m users by 2000, telepoint had attracted only 10,000 owners by early October, when BT, last of the four original licensees, announced it was suspending its Phonepoint operation.

Mercury has already pulled out of the market, while Byps – a joint venture between Barclays, Philips and Shell – has sold its Rabbit service to Hutchison Telecom. Ferranti sold its business to venture capitalists. Hutchison is preparing for a relaunch of its system and BT may revive the service when market conditions are favourable.

Given the present problems in the mobile sector and the

Pole positions: in Throgmorton Street about 1925 ...

... 66 years on: one of BT's women engineers at work

scale of investment required to create a credible mobile alternative to BT's fixed network, question marks remain over whether mobile operators can challenge the existing system.

Meanwhile, overarching the whole process of liberalisation is the regulator, the Office of Telecommunications, better known as Oftel. A paradox of the government's proposals is that liberalisation will be accompanied by increased regulation. Professor Sir Bryan Carsberg, director-general of Oftel, has pointed out that the government has promised liberalisation not deregulation.

The ability of Oftel to deal with the additional demands of liberalisation are unclear, however. The danger is that the benefits of liberalisation could be jeopardised if Oftel proves incapable of doing its job effectively. Oftel's internal processes have been accused of being opaque. There are also questions about whether Oftel has the infrastructure necessary to react quickly enough to a fast changing environment. Oftel has promised to take on more staff, although it insists its present infrastructure is sufficient for the job.

Whether Mr Lilley's bright vision comes to fruition, however, depends only partly on the liberalised environment guaranteed by Oftel. Its success will mostly depend upon the commercial courage of the new entrants. Should that courage be lacking, then the great British telecoms revolution could prove as insignificant as that in the Soviet Union last August.

Paul Abrahams

FRANCE

Characteristics of enlightened paternalism

UNDER successive Socialist administrations, the French telecommunications regime has acquired some of the characteristics of enlightened paternalism.

At present,the state-owned carrier France Telecom still dominates but, in the words of Mr Marcel Roulet, the chairman, its management is "user-driven". He also says a new French telecommunications law which came into effect this year heralds a new era of increased responsiveness to changing market conditions and consumer demand.

In general, the combination of centrally-planned telecommunications evolution and sensitivity to customer needs has worked well. France's telephone service, once the butt of jokes, is now one of the most impressive in the world.

In France Telecom's last financial year the network topped the 28m line mark and the level of exchange digitalisation achieved – at more than 80 per cent – is claimed to be the highest in a leading country. On average the French telephone user is now likely to experience a fault only once every seven years while a mere 0.14 per cent of subscribers complain about the accuracy of their bills.

Three years after its launch, French business users have nationwide access to an integrated services digital network known as Numeris. This can carry voice, data and video traffic with equal facility. France Telecom predicts around 500,000 Numeris users by the middle of the decade.

In spite of earlier controversy about the policy of providing free terminals to the public, the Minitel videotex service is one of the major success stories of French telecommunications. By mid-1991, there were more than 5.7m terminals in use accessing more than 15,000 information services. Last year total French videotex traffic reached 100m consultation hours, the equivalent of 1.5 bn calls.

Significant investment in the network, however, along with the fiscal demands of the central government, has exacted a heavy price. France Telecom has a FFr126bn ($22bn) debt but must live with price caps as it tries to reduce it. Although the service competition it faces is limited to cellular telephony and value added services, the company is not letting the grass grow under it feet so far as new technology or marketing initiatives are concerned.

France Telecom is testing the UK-invented telepoint cordless service in Strasbourg, with free terminals for the duration of the trial, and is planning to order an experimental microcellular personal communication network (PCN) later this year.

In the face of competition from the independent Société Française du Radiotelephone (SFR) in the cellular sector, and with its current analogue network approaching capacity limits, France Telecom is also attaching great importance to the inauguration of its pan-European GSM digital cellular system.

The company has scheduled the initial opening of its GSM network for the end of 1991 and the commercial marketing of the service for 1992. France Telecom has already ordered two pilot GSM systems from consortia headed by Alcatel and Matra. It forecasts that GSM will be the main French cellular technology after 1994.

France Telecom's GSM approach is designed to allow the system to be debugged before letting large numbers of revenue-earning subscribers loose on it. Mr Michel Bertinetto, managing director of France Telecom Mobiles, says: "I don't want to announce the commercial service before having an experimental period to check that the quality of service is at the level that our subscribers are accustomed to".

Apart from its ability to solve analogue cellular congestion problems, Mr Bertinetto believes that GSM has two main attractions.

The first is the digital quality of service. "It is the quality of a compact disc compared to the old vinyl disc", he says.

The second is international mobility. "The capacity of GSM

France's telephone service, once the butt of jokes, is now one of the most impressive

to work all around Europe, and especially of course in the areas near international borders, is a real advantage and a facility requested by our subscribers", Mr Bertinetto points out.

In the wireline network, France Telecom is pioneering the large-scale implementation of synchronous optical transmission, and the company has recently let contracts to Alcatel, SAT, Siemens and GPT for this type of hardware for use in its long distance network.

Synchronous transmission promises to lower the cost of service provision, boost the availability and survivability of corporate networks, and expand dramatically the range of options enjoyed by business telecommunications users.

"It's an open door for the evolution of the transmission network," argues Mr Xavier Maitre, France Telecom's deputy managing director for equipment, traffic and planning. "If you look into synchronous transmission you can find answers to most of your problems," he explains.

On the marketing front, the recent acceptance by France Telecom of the principle of financial liability for the performance of its customers' international networks has been welcomed by corporate users.

This move was prompted in part by the recognition that its hitherto reserved national market would be threatened by EC proposals for community-wide service liberalisation, and by the cross-border encroachments of already de-regulated telecommunications carriers such as BT and the US regional "Baby Bell" companies.

Not content with shoring up its domestic defences, France Telecom is taking the fight overseas and into some of its international competitors' backyards. In the last few months, the company has taken major shareholdings in telephone companies in Argentina and Mexico, won deals to participate in the operation of a paging network in Czechoslovakia and a cellular telephone network in Poland, and begun the build up of a nationwide data network in the UK. It has also been short-listed by the Venezuelan government to participate in schemes to modernise the national carrier CANTV.

As part of the same strategy France Telecom has continued to expand the number of its international ISDN destinations, and lay plans to interconnect the Minitel videotex system to its counterparts in countries as diverse as Spain and Japan.

France Telecom's aim is to

France Telecom is taking the fight into its competitors' back yards

lift revenues derived from overseas activities from 0.5 per cent of the present FFr103bn total to 10 per cent by the end of the present decade. Mr Roulet says that the financial autonomy bestowed on his company by the telecommunications regulation of January will facilitate this expansion and allow France Telecom to "compete on equal footing with other major operators around the world".

John Williamson

International Editor, Telephony Magazine

GERMANY

Reforms driven by unity

GERMAN telecommunications remain in a fascinating state of flux. The task of establishing a modern network in eastern Germany has progressed further than many expected, but has not had the revolutionary impact on the regulatory framework in west Germany for which reformers, most notably those at the German Monopolies Commission, had hoped.

Indeed, earlier this year, when the finance ministry ordered state-owned Telekom to raise its tariffs (already among the highest in Europe) to help pay for unity, it seemed that even the modest deregulation of 1989, which established Telekom as a supposedly independent business, was being undermined.

At the same time, conservatives inside the Bundespost argued that further liberalisation which ate into revenues would have to stop because of Telekom's enormous capital requirements in east Germany.

But the 1989 liberalisation, which opened up all non-voice services to the private sector, has not been reversed; on balance, unification has speeded up the pace of reform. Most significantly, the Telekom monopoly of all voice services has been temporarily suspended to allow the private sector to offer company-to-company satellite links between east and west Germany to help relieve the communications bottle-neck.

This, however, is less revolutionary than it sounds. Satellite links are very expensive and only 15 consortia have so far taken advantage of the new, temporary, freedom. But reformers believe that once allowed, it will be impossible to reverse. They also welcome the attention it has focused on Germany's increasingly untenable ban on all private telephone voice services.

Within western Germany voice traffic is still not even allowed on inter-company links (closed user groups) when public switching is involved. But it is technically difficult to prevent voice traffic – on leased lines meant for data traffic, for example – and an increasing number of companies are turning a blind eye to the law.

Some Telekom executives argue privately that the best they can hope for is that the almost total ban on private telephone links will be challenged in the European Court, because that will give them another three years of monopoly profits.

In some of the non-telephone areas of voice traffic, in particular radio-based systems like PCN, the Bundespost is congratulated by reformers for taking a liberal lead. PCN licensing procedures are set to begin at the end of the year and the system should be operational by 2000.

The private-sector D2 digital mobile phone system should also be operational by the end of this year, in competition with Telekom's D1 system. However, the crucial argument – over the price that the private sector group, led by Mannesmann, will have to pay its rival, Telekom, for the lease of its lines – has not yet been resolved.

Mannesmann argues that leased line costs represent between 20 per cent and 40 per cent of total running costs and that the cost of leased lines in Germany is still four times the OECD average. Telekom answers that reducing the costs for Mannesmann alone would represent a huge subsidy to that company, while reducing them for everybody would cost about DM2bn ($1.1bn) a year.

Mr Christian Schwarz-Schilling, the reform-minded post minister, has come down closer to Mannesmann than many reformers had expected and proposed a 54 per cent reduction in the Telekom leasing rate. He will probably get his way, although the matter may have to go to the cabinet for a final decision. Reformers are hoping that if the minister prevails, the flood-gates will be opened and the pressures to give all users a similar reduction will be overwhelming. The revenue effect for Telekom will be neutral, according to the reformers, as volume will increase radically.

Encouraging though these developments are for telecoms reformers, they also point up how little has changed in large parts of the regulatory framework. "We are still too dependent on progressive decisions from individuals like Mr Schwarz-Schilling. If somebody else was in his position, things might look a lot worse," says Mr Klaus Holthoff of the Monopoly Commission in Cologne.

The Monopoly Commission is also disappointed that a more radical approach has not been taken to rebuilding the east German network, although progress has been faster than expected. An "overlay net" has provided more than 30,000 new lines between the two parts of Germany, which has vastly improved connections, especially from west to east. Telephoning within and out of east Germany can still be difficult, but Telekom aims to provide an extra 500,000 telephone lines in the east this year.

However, the Monopoly Commission, in a recent report, maintains that "an extension of the telecommunications system to match west German standards cannot be expected until the second half of the 1990s". It says that the real bottle-neck is the lack of planning capacity within Telekom "which attests the limited efficiency of a traditional telecommunications monopoly".

The commission recommends the hiring out of the right to build and run networks to private operators within east Germany. The government could continue to licence and regulate but international experience could be tapped to speed up the rebuilding process. Some 30 turn-key project contracts to build, but not run, parts of the new network have been awarded, but all to German companies, primarily Siemens and SEL.

As a second stage the Commission recommends the breaking of the telephone monopoly for the whole country. Until recently, that would have seemed a remote prospect, due to the constitutional requirement that the post and telephone services be run as a "direct federal administration". But now senior Telekom executives such as Mr Gerd Tenzer believe the monopoly can only be held for another four to five years, mainly because of pressure from the EC.

The flotation of part of Telekom, to help pay for unification, is no longer ruled out and Mr Schwarz-Schilling is pressing hard for Telekom employees to be removed from the restrictive public service employment structure. Some optimistic reformers see that as the first step to privatisation.

David Goodhart

ITALY

The big talk show takes off

GREAT talkers and enthusiastic users of the telephone, Italians have grasped the opportunities offered by the cellular system to stay in touch with family, friends and business contacts. The sight of Italians speaking into their *telefonini* in buses and cars, on street corners and in bars and restaurants of Italian towns and cities has become commonplace over the past year.

Figures from the state-owned telephone corporation SIP show that cellular telephone communications have at last taken off in Italy. They had had a slow start, with only 66,000 subscribers at the end of 1989. But at the end of last year SIP had 266,000 users and the surge in demand has continued, in spite of the imposition of a super-tax this summer.

A spokesman at SIP said that new subscribers were joining at 2,000 a day before the tax was introduced. Further expansion was discouraged while the tax measure was being discussed by the government and in parliament, and the number of new users fell to about 1,000 a day. But there has been a good recovery to 1,400 per day, said the spokesman in August.

SIP expects the strong growth to continue. The corporation's four-year strategic plan shows that it expects a further 1m Italians to sign contracts for cellular telephones over the next three years. By the end of 1994 about 1.5m will be packing *telefonini* in briefcases and back pockets.

While promoting and satisfying the demand for portable telephones, lowering cost barriers and broadening the subscriber base to mass markets, SIP also plans action in several other areas. With the quality of basic telephone services earning heavy criticism, not surprisingly these are the focus of most attention.

Ensuring that the customer obtains the desired connection is fundamental. But SIP fails to do so at present, its answer-service ratio being only slightly better than 50 per cent. The corporation's ambitious plans for improving and enlarging exchanges and the transmission network aim to remedy the shortcomings. Dialling telephone numbers in Italy should become less of a lottery.

Installation of digital exchanges will accelerate. As existing electro-mechanical equipment is replaced and new capacity brought into service, the proportion of exchanges using digital technology will rise.

At the end of 1994, 63 per cent of the planned 30,000 exchanges will be digital, compared to year-end 1990 when 67 per cent of Italy's 25,600 exchanges were electro-mechanical. All inter-district junction terminals will be digital by 1995. SIP plans annual growth of 8 per cent for its distribution network and almost 12 per cent for its urban and inter-urban junction networks, with increasing digitisation.

The corporation expects that the number of its subscribers will show a net increase of just over 1m in each of the next three years. The telephone density of 38.7 subscribers per 100 inhabitants (22.3m) at the end of last year is forecast to rise to 46.1 at the end of 1994. Business users are expected to account for around one third of the increase, moving from 4.2m to 5.6m subscribers.

Italians have grasped the opportunities offered by the cellular system to stay in touch with family, friends and business contacts. The sight of people speaking into their *telefonini* has become commonplace

Italy's business sector will be interested in progress in data transmission, where SIP is under pressure from the private sector and the EC Directive on service liberalisation and open network provision. The market is expected to continue its rapid growth, the number of access points to data networks being forecast almost to double in the next three years to 406,000. SIP aims to broaden the range of data transmission alternatives it can offer customers and to improve quality significantly.

To keep pace with progress, and to reduce the gap that has separated its telecommunications system from other industrialised countries, Italy's state telephone corporation is financing a big investment programme. When this year closes L9,900bn ($7,644m) will have been spent. In each of the next three years SIP plans investment of L11,000bn.

Much of the money will be directed towards the distribution network, where investment will absorb a little less than one third of the total. Just over one quarter of spending will go towards new exchanges, and just under one fifth to junction networks.

This is clearly good news for Italian manufacturers whose order books will continue to benefit as SIP implements its plans; and none more than Italtel Sit, SIP's sister company within the IRI state holding corporation. Two thirds of its L1,980bn sales last year were generated by public switching equipment.

With only 3 per cent of sales in export markets, Italtel Sit is heavily dependent on its home market and captive customers SIP and the ASST long-distance carrier. It is fortunate that the Italian market goes against the international trend and continues to be buoyant. "In fact while Europe and the US are feeling a decline in demand for public switching systems, in value terms, the high investment of the operator continues within the framework of its Europe Plan," says a report from Italtel Sit.

However, the future threatens to be harsher. During 1990 Italtel intensified action needed to cope appropriately with the Single European Market. Competition between companies in the sector will increase due to the EEC Directive, approved in September 1990, that has liberalised purchasing by public telecommunications operators.

Concentration and internationalisation are part of the response of Italian telecommunications manufacturers to the challenge. Since June 1989 Italtel Sit has enjoyed the support of a US partner, AT&T. And at the end of last year Fiat reached an agreement with France's CGE regarding its Telettra subsidiary.

But the ability to design and make products and systems that are competitive in terms of performance, price and delivery is fundamental if Italy's telecommunications industry wants to succeed in meeting the challenge.

Figures from the national association of electrical and electronic industries ANIE show that the Italian market was subject to increased penetration by foreign manufacturers last year. At L1,273bn, imports covered 17 per cent of demand, against less than 9 per cent in 1989. And the trade deficit in telecommunications equipment increased to L651bn from L468bn in 1989.

The figures suggest that Italian firms are not strong in the open market, exports being equivalent to 9 per cent of aggregate turnover. ANIE notes that a large part of the trade deficit was in user equipment, an area outside the protective barriers that should now be dismantled. How vulnerable to attack will the Italian market be if or when it is effectively opened to foreign manufacturers?

David Lane

SCANDINAVIA

Mobile sector is Nordic flagship

THE mobile communications sector is the flagship of the Nordic telecommunications industry. The inauguration in 1981 of the pan-Scandinavian NMT, the first international cellular mobile telephone network, gave the telecommunications equipment companies Ericsson and Nokia a head start in penetrating the global market for mobile communications.

Ericsson of Sweden claims to be the world's largest supplier of mobile telephone network equipment, while Nokia of Finland says it ranks second after Motorola of the US in selling mobile phone handsets worldwide.

The deregulation of mobile telecommunications in crucial markets, particularly Europe and the US, has benefited the two companies. But most of the Nordic countries have made slower progress in this regard until recently. It is the arrival of the European standardised GSM system that has provided the breakthrough for increased market competition.

The region offers rich possibilities.

Scandinavia has the highest proportion of mobile telephone users in the world. Sweden led the global league in March 1991 with a penetration rate of 60 per 1,000 inhabitants, followed by Norway with 51 per 1,000, Finland with 48 per 1,000 and Denmark with 30 per 1,000.

The deregulation of Nordic mobile telephone services is also opening the door to competition in other telecommunications sectors.

This is increasing pressure on the state telecommunications agencies to raise new investment capital by privatising.

Sweden's Televerket, the biggest Scandinavian telecommunications agency, has enjoyed a de facto, if not legal, monopoly on services during most of the post-war era.

The only domestic competition it faced during the 1980s was from Comvik, a subsidiary of the Kinnevik investment group, which operates a small analogue mobile telephone system against NMT. The threat offered by Comvik was minor since it was awarded only 50 frequencies compared with 800 for Televerket.

Scandinavia has the highest proportion of mobile telephone users in the world. Sweden led the global league in March 1991 with a penetration rate of 60 per 1,000 people

But both Comvik and NordicTel, which is owned by a consortium of Swedish companies, have been granted licenses to operate GSM networks, where frequencies are more evenly divided, guaranteeing greater competition.

Tele2, a joint venture between Comvik's parent company Kinnevik and Cable & Wireless of the UK, is aiming to take a slice of two other profitable areas: data communications and overseas traffic for business customers. They have leased a fibre-optics network and linked it with satellites. The competition for international communications is particularly worrying for Televerket, which derives an estimated 30 per cent of its profits from this sector, although it accounts for only 3 per cent of traffic volume. Moreover, foreign competitors, such as British Telecom and AT&T, are also seeking to capture some of the international traffic generated by the country's big multinationals.

Mr Tony Hagstrom, the Televerket general director, last year proposed that 45 per cent of the agency be privatised. The stock issue would raise at least SKr15bn, with the new capital invested in new domestic projects as well as funding international expansion.

Televerket believes that it and other small and medium-sized telecommunications agencies must band together to resist the growing challenge posed by their bigger competitors, including AT&T and the German and British telecoms, for international business customers.

It already has small joint ventures in the Netherlands and the Baltic states and is searching for other European partners.

Although the new non-socialist government in Sweden favours some form privatisation of Televerket, it is considering a proposal that would retain state control over the telecommunications infrastructure while privatising services. This would reduce Televerket's ability to support less profitable operations, such as local phone service, with funds from more lucrative sectors, such as foreign calls.

Cross-subsidising operations in the past allowed Televerket to charge among the world's lowest rates, while remaining one of the world's most profitable phone companies with the ability to self-finance large capital investments.

Denmark is already privatising its national telecommunications operator, with the state retaining a 51 per cent share. The Danish Telecom agency will face a private competitor in the GSM mobile telephone sector next year. The new operator, Dansk Mobiltelefon, was awarded the license in June. Its owners consist of Denmark's Great Northern telecommunications company, Bell South of the US, and Sweden's NordicTel.

In the deregulated Finnish telecommunications market, where 51 local phone companies compete against the state telecom agency, Radiolinja become the first private operator of a GSM network on July 1.

Norway is expected soon to pick the private competitor to Norwegian Telecom in the GSM sector. The consortia competing for the franchise include Netcom, which consists of Sweden's Comvik and the Norwegian food and drink companies Nora and Orkla Borregaard, as well as another group dominated by Racal of the UK and NordicTel. Bell Atlantic of the US is also making a bid in co-operation with Norvans, a group of Norwegian financial institutions.

The competition among GSM operators is also increasing the battle for orders between Ericsson and Nokia on their home territory.

Both make cellular infrastructure equipment. Ericsson's close co-operation with Televerket has won it a dominant position in Sweden. It also received an contract last year from Norwegian Telecom to provide the equipment for its GSM network. Nokia, meanwhile, is supplying the GSM network equipment to Radiolinja in Finland.

Nokia has also used the start of GSM operations in Finland to begin testing what it claims is the world's first GSM telephone.

Nokia predicts that the development of GSM system in Europe and the increased service competition it has fostered will lead to lower rates and boost demand for mobile telephone handsets, sharply reducing their cost as production volume grows.

John Burton

SPAIN

A timely change of the company's culture

IT IS LIKELY that Telefonica's management will remember 1991 not as the year when the company secured beachheads in Latin America and finally had its mythical income target of Pta1,000bn ($9bn) within reach.

Much less will it recall this year as the one when the waiting list for domestic telephones was brought down to "only" 250,000 applications – there were 590,000 frustrated would-be users in 1988. Average waiting time to have a new phone installed is now down to less than three months whereas a year was the usual waiting period.

For many executives the awesome event of the year was a deal with the unions that put paid to the 8am-3pm single working shift. "What we have done is to start to change the company's culture," said a Telefonica spokesman.

The "change" has not come a moment to soon. In July, the domestic market for terminals was deregulated and domestic users, who previously had to hire their main telephone sets from Telefonica, now have until January 1, 1993 to decide whether to purchase them from the company or buy them instead from the competition.

Telefonica is hoping that, as occurred to AT&T in the US and to British Telecom following liberalisation, the the public will remain loyal to it partly out of inertia and partly because of a gut feeling that the local giant will ensure the best service.

Service has not traditionally been one of Telefonica's better points, understandably perhaps given the company's former monopoly status. Henceforth it will be the main selling point in the battle to persuade users to buy Telefonica terminals.

That is why the company's 30,000-strong army of telephone installers and repairers had to be persuaded to work round the clock, seven days a week. The company's executives say the working shift deal with the unions was "costly" but that it was a vital investment to prepare for the new competitive environment.

In another crucial indicator of corporate cultural change, the Telefonica technicians who actually visit the end user of the company product in their homes and offices are now being offered bonuses for every supplementary phone or service that they are able to sell.

From suppliers of a monopoly service (which they only provided up until the time of the Spanish lunch hour) Telefonica's employees are now, or so the management hopes, being turned into round-the-clock salesmen in a highly competitive sector.

There are other signs that the grand old lady of Spanish telecommunications, as well as the largest domestic company in terms of labour force, is waking up to new realities. One is the installation of some 40,000 new "smart" pay-phones around the country which will take coins, credit cards or Telefonica's own pre-paid calling cards that can be bought in post offices.

Waiting time for a new phone is now less than three months compared with the usual year

Telefonica last year invested Pta700bn in telecommunications infrastructure, a sum that went a long way towards shortening the waiting list and which lifted the proportion of higher quality digital-type users of Spain's 14.4m phone lines to 30 per cent. Investment this year is somewhat down to Pta640bn.

Another sign, and a more remarkable one, was the manner in which Telefonica finally came round, earlier this year, to facing the fact that Spain had exceedingly cheap rates for local calls and had horrendously expensive tariffs for international ones. Multinational companies in Spain routinely had their head offices ring them and saved up to 30 per cent of their telephone charges as a result.

In a radical overhaul of the rate system the price of local calls of less than three minutes was doubled and that of international calls was cut by 10 per cent. For good measure the cost of installing a telephone was increased by 20 per cent to Pta21,000. All in all the new tariffs were expected to increase the company's revenue by around Pta45bn a year.

The company expects that the first six months of this year will show revenue rising to close to Pta500bn, thus making feasible an annual income close to Pta1,000bn. This Pta1,000bn figure has been something of a Telefonica myth ever since it passed the Pta500bn mark in 1987 and continued to expand steadily.

While the surge in demand for Telefonica's services has been huge in the domestic market mirroring the growth of the Spanish economy since midway through the last decade, the company has been most obviously ambitious in its expansion into Latin America. Iberoamerica, as Telefonica's officials term it, is seen as the priority area in which to expand.

In this field there have been successes and failures with arguably the latter looming larger as 1991 wears on.

A bid to buy into and operate the Venezuelan telephone service on similar terms as the company has managed to secure in Argentina has been turned down although Telefonica may still gain a foothold as part of a consortium. The privatisation process in Puerto Rico, which had also fired the Spanish company's enthusiasms, is likewise failing to mature.

Telefonica's problem is that it appears to have put almost all its international expansion eggs in the Latin America/Iberoamerica basket banking heavily on a shared language, a common cultural heritage and an equivalent level of medium technology.

While there are a number of objective reasons why this area should be especially attractive to a Spanish company it is no less true that it is, as a Telefonica official politely put it, "erratic" in its approach to privatisation.

Chile, where Telefonica has a big telecommunications stake, and Argentina, are hopefully going to be the eventual foundation stones for the Hispanic telephone link-up. Negotiations to enter these two markets were protracted and often strained. The company is determined to declare its interest wherever opportunity appear on the continent and, as in the case of Venezuela and Puerto Rico, be patient and tenacious when the bidding starts.

As Telefonica takes on its new EC-inspired cultural identity, it may discover that it is more successful in these ventures.

Tom Burns

Eastern Europe

The scale of needs is enormous

Poised for a quantum leap

FROM the Elbe to the Pacific, the world's formerly most secretive, and hence least communicative societies, are gearing up for the quantum leap in telecommunications technology and investment required for their re-integration into the world economy.

The scale of the needs and the ambitions is simply enormous. In the crudest quantitative terms the 125 telephone lines per 1,000 inhabitants in the former Comecon countries of eastern Europe, including the Soviet Union, compares with 375 per 1,000 on average in the European Community and 500 in former West Germany. Most of the existing equipment, outside the most privileged military sectors, is technically obsolete, and much of it 40 years of age or even pre-war.

Putting an accurate figure to the investment required for modernising services over this vast and disparate area of the globe is virtually impossible, but is likely to be more than a $100bn over the next two decades.

As far as eastern and central Europe is concerned the dissolution of the Warsaw Pact has rendered redundant the former restrictions on technology transfers imposed by the 17-nation Co-ordinating Committee for Multilateral Export Controls (Cocom). The strategic trade watchdog was formed to prevent arms-related technological transfers during the Cold War and includes Japan and Australia as well as all Nato countries except Iceland.

The still uncertain future shape of the former Soviet Union, however, is reflected in a residual western wariness towards Soviet technology purchases in some areas, including telecommunications. This has led to maintenance of restrictions in crucial areas such as fiber-optics technology, in spite of the START strategic arms reduction treaty and the accumulating evidence of a profound and probably irreversible shift in Soviet thinking and goals.

The new export rules decided by the Paris-based organisation in May, and which came into effect on September 1, amount to a significant easing of restrictions on western exports. Moscow, for example, will now be allowed to buy fibre-optic cables with a capacity of up to 45 megabits per second, equivalent to the best available in the US a decade ago, and will also be able to buy high-powered telecommunications switches and other formerly banned equipment.

The new Cocom rules were laid down, however, before the failed coup in mid-August the unintended result of which was the emasculation of the Communist party and the secretive parallel power of the security forces. The justifiable pre-coup caution now looks far less sustainable. The argument for allowing western telecommunications companies to help construct an internal fibre-optics-based telecommunication system across the Soviet Union is now much stronger than before, although western security watchdogs will still seek to prevent the military gaining access to such a secure form of communication while the wide open spaces are still dotted with Soviet strategic nuclear and other defence installations.

In the meantime, the needs of western businessmen for better Soviet telecommunications are likely to be met in the first instance by improved satellite link-ups and by projects to connect both sides of existing or upgraded Soviet landlines to state-of-the-art global telecommunications links abroad.

The first stage of one project is a planned 1,300km underwater fibre-optic cable from Copenhagen to St Petersburg (Leningrad) where a radio link will be used to connect the former Imperial capital with Moscow. Great Northern Telegraph and Telecom Denmark, the two Danish companies involved in the Dkr500m (US$76m) project which will carry 16,000 simultaneous calls, have already received Cocom approval to go ahead with this new external link.

The UK-based Cable and Wireless group is heading a similar consortium which includes the US Simplex Wire and Cable company and the Soviet PTT. It plans to lay two high-capacity undersea fibre-optic cables at either end of the Soviet Union to link it with existing international communications.

Under such arrangements, long-distance calls within the Soviet Union could leave Soviet territory, flash around the world and return via the opposite link quicker and with higher definition than via the Soviet Union's existing copper wires.

But the most needed improvement is in the Moscow area which has the highest concentration of western businessmen and will retain a crucial position as capital of the re-vamped Soviet Union and of the Russian republic. Improvement is now in the offing. Sovintel, a joint venture formed by GTE, the US telecommunications group, the Soviet PTT and San Francisco-Moscow teleport, a US-Soviet joint venture, plans to improve telecommunications links for businesses and hotels.

Sovintel's international switching operation with 240 dedicated circuits will add practically 50 per cent to the meagre number of existing Soviet foreign circuits.

Two crucial factors conditioning the pace of telecommunications modernisation are availability of finance and the willingness of foreign companies to build production facilities to serve the new markets. The World Bank, the new European bank for Reconstruction and Development and other international financial institutions have singled out the financing of telecommunications projects as a top priority. But willingness to make large-scale equity investments in production and training is also a key determining factor in the awarding of contracts.

The Soviet Union in particular is desperate to find skilled civilian jobs for millions of redundant defence industry workers.

Poland, with more than 36m inhabitants and one of the most antiquated telecommunications systems, is the next biggest potential market after the Soviet Union. It recently received a $120m telecommunications loan from the World Bank which spurred fierce competition between European and US companies.

After strong political lobbying American Telephone and Telegraph was awarded a $100m contract to modernise the Polish telephone system and improve links for 70,000 new business subscribers, a top priority in Poland's 10-year $1.5bn investment programme. This aims to more than treble its existing lines to between 10m and 12m by the end of the century. At present Poland has only 3.3m phones, or fewer than nine per 100 inhabitants.

Ameritech, another US company, and France Telecom also recently beat British Telecom to win a licence to set up a cellular telephone network after a controversial shift in tendering procedures.

Poland, together with Hungary and Czechoslovakia, are considered the "fast track" countries with the greatest potential to integrate into European and world markets.

The pace of modernisation in Romania and Bulgaria is expected to be slower. But in all countries modernising the industry will require large scale re-training, heavy investment and a revolution in attitudes towards service and maintenance.

Anthony Robinson

SOVIET UNION

Plans for a gateway to the world

LIKE almost any other aspect of public life, Soviet telecommunications were not exempt from the shock waves of the abortive *coup d'état* last August.

The collapse of centralised government structures which followed gave the 15 Soviet republics, including the three Baltic states which became fully independent, the freedom to manage their own affairs, including telecommunications.

"Every republic is now entitled to its sovereign telecommunications system, to build it, exploit it, and at the same time with this network serve the interests of a common economic space," said Dr Vladimir Bulgak, the Russian post, telecommunications and space minister, in an interview.

He then produced a paper with the signatures of every republic's telecommunications minister (including those of his three Baltic colleagues who are described as "observers") and the deputy Soviet minister.

On it is a proposal, agreed by the ministers, for an inter-republican committee to co-ordinate telecommunications policy in the absence of an all-union ministry which has been all but dissolved. This new committee would be chaired by republican ministers on a rotating basis, and decisions would be taken by consensus.

Moscow calls: telephone services in the Soviet Union are primitive — Tony Andrews

Encouraged by this agreement, which simply requires the approval of top republican leaders, he denied that telecommunications policy was in danger of fracturing along republican lines to the point where even their standards conflicted with each other.

"That is not a danger. But what is a danger, if you want to use this word, is that foreign investors will no longer be able to deal through just one union ministry, but with each republic. From now on, if you want to invest in Uzbekistan, you've got to go directly to Uzbekistan."

He is well placed to attract a lot of that investment. The new balance of power put President Boris Yeltsin's huge Russian federation in a position of pre-eminence among fellow republics in a new as yet undefined sort of confederation.

This means that although he denies it, Dr Bulgak has effectively become first among equals. After the coup attempt, he was given control over all telecom authorities on Russian territory which previously passed as all-union assets.

On the industrial side, he has become the buyer of 75 per cent of the switches and other output of Soviet state telecommunications manufacturers grouped in a pseudo-independent group called Telekom.

While admitting that services in the Soviet Union were primitive, Dr Bulgak placed the blame on the inability of industrial enterprises to deliver new equipment.

"We have money but nothing to spend it on," he said, explaining that telecommunications authorities in Russia last year made a net profit of Rbs2bn ($1.2bn) after expenditures of Rbs7.7bn.

Although Dr Bulgak said Telekom would continue to operate as "something of a monopoly" in Soviet terms, they would not be shielded from the competition of foreign companies.

Like a number of other republics, Russia is doing its utmost to attract foreign investment, seen as crucial to rapid modernisation of telecommunications and other industrial sectors. A law passed on July 4 allows 100 per cent foreign ownership of enterprises on Russian territory and the establishment of wholly-owned subsidiaries of foreign companies.

So far no foreign telecommunications company has taken advantage of this legislation but there are already a number of joint ventures up and running to manufacture digital switching equipment and other components for a modern telecommunications system.

In Leningrad, state-owned Krasnaya Zarya (Red Dawn) has set up a joint venture with Alcatel Bell, the Belgian subsidiary of France's Alcatel, which will manufacture the French company's new generation of digital exchange, System 12.

This modernisation drive is even involving defence plants seeking to convert to civilian output.

In the town of Izhevsk, east of Moscow, a defence plant called Motozavod has teamed up with Siemens to produce the German company's EWSD's digital switching system. With production due to start next year, Dr Bulgak said that this would provide 100,000 lines next year, reaching 1m by the end of 1995.

Apart from improving inter-urban and rural communications within the Soviet Union, Dr Bulgak said there were plans to build three international gateways to facilitate communications with the outside world.

But the most ambitious telecommunications project of all, laying high capacity fibre-optic cable from the Baltics in the west, to Nakhodka in the east, and the Crimea in the south is still on hold because of Cocom restrictions.

Dr Bulgak hoped that following the defeat of last month's coup, restrictions on the import of components and technology for this $500m project would soon "be softened to meet us" so that an international consortium could begin work on connecting up the Soviet Union with the rest of the world.

Leyla Boulton

CZECHOSLOVAKIA

Political storm rocks industry

THE OFFICE of Mr Otakar Filipec, director of Prague Telecom, is full of old telephones. He affirms that these are antiques and not representative of those found in Czechoslovakia. But only last month, a telephone exchange dating from 1938 was removed, he adds.

With 60 per cent of the telephone exchanges in Czechoslovakia dating from the 1950s, the country's telecommunication network has a urgent need for investment. But foreign companies entering the market have found themselves caught in the political storm which is rocking the telecommunication industry in Czechoslovakia.

At the core of the battle is the question of which political body will eventually be in charge of telecommunications in Czechoslovakia. The wrestling match between federal and republican authorities, both vying for increased control over the industry, has delayed the privatisation of the network until next spring and put off urgent restructuring decisions.

In theory, the federal ministry of post and telecommunication is in charge, jointly with the privatisation ministry, of revitalising the telecommunications sector. But the volatile political climate at the department – with no less than four heads since the 1989 revolution – has done little to help push through concrete decisions.

Instead, the government in the republics have steadily intensified their demands for a say over the future shape of the network. On August 1, the Slovak republic went as far as creating its own telecommunications ministry. Moreover, the managers of the Administrations of Post and Telecommunications (PTTs), the umbrella organisation supervising the network in each republic, have opposed the federal plans.

All these different players have confused the process of restructuring telecommunications in Slovakia so much that further steps are impossible, say western investors. Despite recent joint-venture agreements, the constant change in partners has made it difficult to go ahead with contracts.

Both Alcatel SEL and Siemens have secured 30 per cent each of the supply market by signing joint venture agreements with the firms Tesla-Liptovsky and Tesla-Karlin. These two companies were former parts of the electronic firm Tesla which had a monopoly over the supply of telephones under the old regime.

The two foreign companies have secured a majority stake in the joint ventures and will be entitled to compete for the remaining 40 per cent of the market which is to be open to all-comers

Their contracts say that equipment will be imported until the production facilities

At the core of the battle is the question of which political body will eventually be the controller of telecommunications

in Czechoslovakia are upgraded.

But no imports have yet been made,according to one of them, because of the confusion surrounding the partners on the Czechoslovakia side.

"Everybody quarrels with everybody and at the end of the day, you don't know who you are dealing with. It's just a big mess." he adds.

Despite the international tender which selected the two companies last February, it remains unclear as to whether or not another foreign company will be invited to supply for the remaining 40 per cent of the market.

US West and Bell Atlantic have also jointly signed a joint-venture agreement with the two PTTs in each republic to supply Czechoslovakia with cellular telephones and packet switching data networks.

Mr Ernest Tuttle, managing director of the venture called EuroTel, says that the company is planning for 50,000 cel-

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HUNGARY

A leapfrog to modernity

AFTER decades of neglect, Hungary's telephone system is spread thinly, even by east European poor standards. But nowhere in the region is the effort more advanced to bring telecommunications up to scratch.

Hungary's very backwardness has its advantages. "There is an opportunity to leapfrog", says Mr Gyula Partos, the official at the Ministry of Transport and Communications who designed the new strategy.

By the end of the century, it is hoped Hungary will have one of Europe's most modern telephone systems. Moreover, because policy is being devised from first principles, it is likely to be more liberal than that in continental western Europe. Because it is too costly to be financed domestically, the programme also requires foreign involvement and privatisation of Hungarian Telecommunications Company (HTC), the state-owned monopoly.

Hungary's line density in the mid-1980s was lower than that of all its eastern European neighbours and about one-fifth of the European Community level. Official estimates show that the number of lines has increased from seven per 100 people then to over 10 per 100.

One way to avoid 12-13 years on the waiting list is to obtain a "black line" by bribery. The cost is about 10 times the standard Ft12,000 ($157) connection fee. It is common knowledge inside HTC that district managers, at least until recently, could more than double their basic salaries through such payments.

The telephone network is breathtakingly outdated as well as overstretched. Much of rural Hungary is covered by manual switches and so is cut off after 4pm when the operators go home. The backwardness extends to Budapest. The Jozsef rotary switch, which serves the capital's 8th district, is such an amusing museum piece that visiting western telecommunications experts specifically ask to see it.

International connections are better. Even as traffic has expanded hugely, connections have improved since Ericsson supplied an AXE exchange for the international gateway. Central European Investments, a research firm, cited telecommunications as one of Hungary's immediate attractions in the competition with Poland and Czechoslovakia for western investment.

The economic cost of substandard telecommunications is still great: Ft 10bn ($130m) a year directly and many times that indirectly, according to Mr Partos.

By the end of the century, Hungary hopes to have one of Europe's most modern telephone systems. Moreover, because policy is being devised from first principles, it is likely to be more liberal than that in western Europe

Much is being done to remedy that. Hungarian telecommunications investment, at 0.77 per cent of gross domestic product, is around double the rate of other east European countries, according to the most recent comparative statistics. The level of spending is driven by the need to catch up and by sheer profitability. The international switch paid for itself in as little a year, according to Mr Pal Horvath, HTC's managing director.

Moreover, investment is going to increase sharply. HTC plans investment in equipment of Ft110bn ($143m) over three years. Three-quarters of that will go on a digital overlay network. This will connect about 400,000 extra subscribers in three years, mostly new and business customers, providing them with voice and data services, including ISDN (integrated services digital network).

The 56 large digital switches required for the overlay will be supplied by Ericsson and Siemens. They won a recent tender which was designed to extend competition in procurement and counteract the former market dominance of Northern Telecom and its local partner, BHG.

Beyond the basic programme, HTC will help local authorities and companies to install a further 300,000-350,000 lines.

Taken together, the plan calls for maintenance of the current growth rate in the number of lines of more than 10 per cent. That is needed to bring Hungary to its target of 27 lines per 100 inhabitants by the end of the century.

Little of the funding for this massive programme can come from the cash-strapped Hungarian state; about half of HTC's investment will be funded internally. To this end, tariffs increased by an average of around 50 per cent in the new year.

But the programme must also rely on credits of $150m from the World Bank and $100m from the European Investment Bank. A $50m credit from the European Bank for Reconstruction and Development for rural network development is also possible.

Another crucial element will be foreign equity investment, either directly into HTC when it is privatised or in joint ventures with the state telecommunications company.

An audit by Coopers & Lybrand, which valued HTC at about Ft60bn ($794m) was the first step. The authorities are choosing between 18 firms which bid to advise on HTC's privatisation strategy. The most significant constraint is that the Hungarian state, HTC's sole owner, intends to maintain a majority stake in the basic network.

Even in advance of privatisation, HTC is being shaken up. Drastic personnel changes have reduced the average age of senior managers from over 50 to under 40, according to HTC's Mr Horvath. "HTC is no longer a lazy public utility", says Mr Partos.

Communications ministry officials have come up with plenty of radical ideas to liberalise services. One proposal would have put one of the legacies of communism into the service of a free market in telecommunications. Administration, police, army and utilities networks, whose combined length exceeds those of the HTC, could be joined to provide parallel competition.

A new telecommunications bill to go before parliament this autumn will break HTC's monopoly in many areas and give Hungary a relatively liberal regime. The draft does not exclude parallel network competition or set limits on foreign participation.

"I'm not afraid of competition", says Mr Horvath. "It is also in the interest of the monopoly provider. The fate of a dinosaur is very sad." But he questions the desirability of a second backbone network. "It is easy to take away rights and resources from HTC. It is very hard to create something operational."

It appears that the government has responded to HTC's concerns and policy will be less radical than that allowed by the proposed legislation. Parallel networks will have to wait until a nationwide network is fully established.

In the meantime, operation of local networks may be put out to tender. Competition will be given freer rein in mobile, packet-switching and value-added services. WesTel, a mobile telephone joint venture between HTC and US West, already has 5,000 customers.

Part of the government's reluctance is for very western reasons. "It seems that right now the government wants to give the chances to privatisation and not to liberalisation", says Mr Partos. Moreover, the HTC lobby is "very strong", he says. Some officials even complain that the minister is closer to HTC management than to his own advisers. The irony, they say, is that the former communist government was more liberal in its approach.

"But even in the current draft, Hungary will go beyond the European approach", says Mr Partos. He accepts stoically that liberal dreams have come in contact with reality.

Nicholas Denton

POLAND

So much ground to make up

THE MESSAGE in the small ad in the newspaper the other day was clear if slightly desperate.

A company was moving offices to another Warsaw district and proposed to swap the four phone and one telex lines in its present location for similar facilities in a suburb. Failing that it said it was open "to other suggestions in the way of getting lines".

Such advertisements, reflecting chronic problems with the telephones, are going to appear for some time as Poland struggles to modernise and expand its telecommunications systems.

It is an awesome task. The ministry of communications would like to see some 10m new lines installed at a cost of up to $15bn by the end of the century. It is difficult to see where the funds could come from to back such plans.

For the moment the ministry has been able to raise some $600m from western government and commercial sources including the World Bank and the European Investment Bank. But the availability of foreign funds does not mean that domestic finance will be easy to come by.

Indeed Mr Jerzy Slezak, the communications minister, is anxiously looking for the Zl 5,500bn ($500m) he needs to set Warsaw's telephone system to rights. This has to be spent on top of the $120m in credits he already has to pay for seven S 12 transit switches for the Polish capital to be supplied by Alcatel Sesa of Spain.

The problem is that there is so much ground to be made up. Warsaw had its first telephone system of 200 lines run by the Bell Telephone Company in the 1880s. The city had 30,000 lines by 1914. The country now has some 3.3m lines or not much more than ten per 100 inhabitants.

But telecommunications services are growing despite the shrinking of the economy as the authorities maintain a grip on money supply.

Installations this year are expected to reach 227,000 compared with 90,000 in 1979 or 150,000 a year ten years later.

A new telecommunications law has ended the monopoly of the system up to a point. From the start of 1992 the state-owned Polish Post Telegraph and Telephone Company (PPTT) is to be split into two units. Poczta Polska will handle the postal service and Telekomunikacja Polska SA will provide telecommunications.

The law says international phone links are to remain under state control but domestic services can be provided by private operators. The share of any foreign capital in such companies must not exceed 49 per cent. Private operators are free to set charges but the state retains the right to fix an upper limit on fees.

So far licences have been issued to two private operators. One is to TESA which is providing an electronic postal service and the other is to the Banking Telecommunications Society which aims to provide banking sector services.

The government's development plans are running at two levels, the local and national. Earlier this year the World Bank approved a $120m loan to finance a national digital network which would overlay the present system.

This is being co-financed by the European Investment Bank with a $90m loan to provide phones for 70,000 businesses and improve services for 900,000 private subscribers.

Meanwhile a new international exchange has been provided for Warsaw by AT&T. Siemens of Germany is to do the same for Katowice and Poznan will be served by a new exchange from Alcatel CIT.

A fibre optic link between the Polish coast in Koszalin and Denmark is being extended to Warsaw and eventually to Ostrawa in Czechoslovakia. Talks are continuing about running another fibre optic line from Germany to Warsaw and then on to Moscow.

At the national level a contract to install a cellular mobile communications network was recently awarded, after a long and tortuous selection process, to a consortium bringing together Ameritech from the US and France Telecom. This could see the installation of up to 100,000 lines.

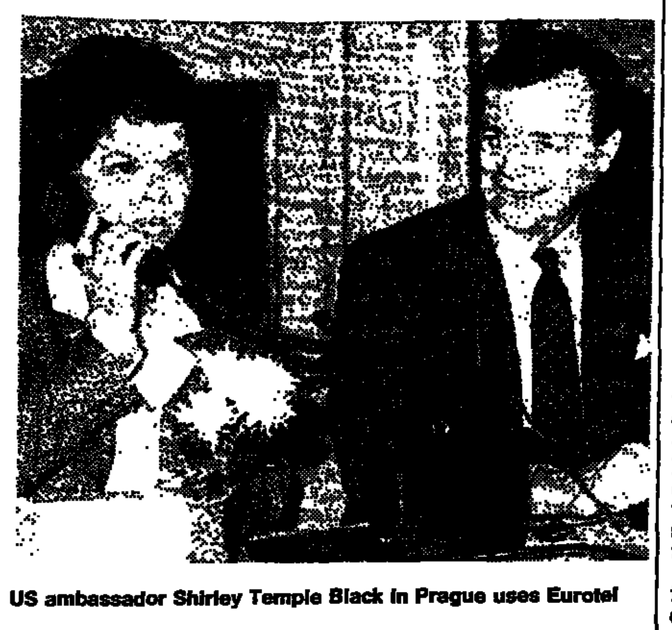
Locally AT&T, which has spoken of investing $800m in Poland, is offering to put in a 170,000 line system in Szczecin in the north west of the country. Further south, in Opole, South Korea is ready to guarantee a $50m loan to have Samsung install a 113,000 line system.

Przemysl, in Poland's south eastern corner, is to have the Italian ITALTEL company install 51,000 lines paid for with $20m worth of credits guaranteed by the Italian government. Most recently Siemens has arranged financing worth DM 57.3m to install new switches in Katowice thus providing 170,000 lines.

Poland's telecommunications industry can derive some hope from joint ventures with western producers. Thus Telcom Teletra in Poznan has a joint venture with Alcatel CIT to produce E 10 switches and Siemens has come in with the Warsaw based ZWUT switch producer to produce switching equipment.

It looked as if Ericsson of Sweden would be shut out when Poland refused to accept that its AXE 10 equipment could be used in the country. However fierce lobbying by the Swedes caused the ministry to change its decision and another joint venture to produce equipment is being considered with the Telcom Telfa plant in Bydgoszcz.

Christopher Bobinski



US ambassador Shirley Temple Black in Prague uses Eurotel

Political storm

Continued from page 29
lular telephone customers over the next five years. The network will be operative in Prague, Brno and Bratislava this autumn. It will then be extended to 25 other cities.

Cellular telephones are likely to prove an attractive proposition. The waiting list for lines in Prague alone numbers 68,000, the period for installation varying between one month and a couple of years depending on the neighbourhood.

Moreover, many flats share one line, which means that a telephone line can suddenly be occupied for any length of time by another unknown caller.

Other foreign investors looking into the Czechoslovak market include French Telecom which has plans to supply public phone booths using computerised plastic cards instead of coins. But here too, the political quagmire has hampered negotiations.

Foreign investors will eventually participate in the modernising of the telephone network once a privatisation plan is agreed upon. For the time being, the one concrete action has been the separation of the Post Office from telecommunications.

Mr Bruno Duthoit of France Telecom explains: "It all depends on what exactly they will decide to do with their network. One needs to know whether there is going to be one federal network or two republican ones before any further investments can be made. Then, one will be able to see if there is going to be digital overlay network, for example".

Mr Lubomir Bokstefl, deputy minister at the federal telecommunication ministry, says that the final ownership structure will include a 20-30 per cent foreign participation. The rest will remain state-owned, with 10 per cent becoming employees' shares.

He says the government plans to double the number of telephone lines in the country over the next ten years. Czechoslovakia has currently 15 lines per 100 flats. It ranks above Poland and Hungary which each have about 11 lines per 100 flats.

But doubts remain that all partners in Czechoslovakia will agree on a final privatisation structure.

Another official at the federal ministry of telecommunications suggested handing out the whole network to existing local companies and eliminating thereby the power of the PTTs' managers.

"Consider this: we were told that the quickest way of privatising a telecommunications network was done in New Zealand. And that took three years!" says Mr Filipec of Prague Telecom, one of the companies under the Czech PTT.

Ariane Genillard

Pacific Rim

IN THE Asia-Pacific region, telecommunications offers some stark contrasts. In Singapore, it is usual for new homes to be wired into the all-computerised telephone network before the owners move in. Less than four hours' flight time away, many of the inhabitants of Papua New Guinea have probably never seen a telephone.

John Williamson on prospects for growth in Asia and the Pacific

Buoyant regional market

Aside from such disparities, the region's telecommunications market is buoyant and predicted to have significant growth potential. Mr Mel Ward, managing director of Telecom Australia, estimates that the region's 37m telephone lines will grow to around 325m over the next 50 years. This will involve the expenditure of some A$1,200bn (US$944.8bn) at today's prices.

For several countries the immediate priority is to enlarge the basic wireline telephone network. Some have modest budgets. Papua New Guinea, for example, is embarking on a $350m, five-year expansion programme. Malaysia is more ambitious, spending around $2.1bn in the period to 1995. The present telephone density is about 8 per cent; the target for the end of the century is 25 per cent.

Although equipment and service provision has traditionally been the preserve of government monopolies in most parts of the region, competition is being sponsored in an increasing number of countries, with the aim of accelerating growth.

Thailand exemplifies the the trend. Part of the country's seventh five-year development programme envisages the addition of around 3m new telephone lines. In an effort to raise the $5bn investment needed without exceeding the overall debt ceiling imposed by the Thai authorities, the Telephone Organization of Thailand (TOT) was allowed to invite outside companies to participate in funding, building and operating new exchanges in return for a share of the revenues generated.

Last year it was reported that, from five candidate consortia, the local Charoen Pokphand business group, teamed with the UK's BT, had been selected to partner TOT. Since then, however, there has been political opposition to the scheme in Bangkok, and it remains unclear whether local telephone operations form part of BT's international strategy.

Competition is also being used to drive down prices and to extend consumer choice in non-voice services. In South Korea, for example, Dacom, formerly the national monopoly provider of value added service (VAS), will next year be able to offer international telephone services and, at some unspecified date, local telephone service. Dacom aims to cut international calling costs by 10 per cent and achieve a 30 per cent share of the Korean market by 1993.

According to the US-based Pyramid Research consultancy, falling regulatory barriers in Asia and rising demand for non-voice services are creating a "sea of opportunities" for VAS providers and their suppliers.

In Japan, deregulation since 1985 has led to the emergence of more than 30 specialised value-added networks and nearly 900 VAS providers. Pyramid estimates that Japan's 1990 VAS revenues of $1.4bn will top $7.3bn in 1995.

An important consideration in Australia's telecommunications deregulatory strategy was the need to encourage the efficiencies which would help Australian carriers win business in international markets.

Although some significant initiatives have yet to be finalised – including the merger of the overseas carrier OTC with Telecom Australia, and the establishment of the Aussat domestic satellite concern as a private sector competitor – the strategy seems to be paying off already. Against fierce international competition, Telecom Australia has won contracts to manage Saudia Arabia's telephone network, build an optical fibre system in Pakistan and operate radio communications and paging services in Poland.

Closer to home, there are important export opportunities for Telecom Australia and like-minded regional operators. It is estimated that trade between North America and other Pacific Rim countries was worth $20bn in 1970, had grown to $275bn twenty years later, and could rise to $1,000bn by the end of the decade. As well as expansion of national telecommunications markets, this implies the growth and consolidation of regional infrastructures.

Last year the AsiaSat 1 satellite was launched from China aboard a Long March 3 rocket. Owned in equal shares by Cable & Wireless, the China International Trust and Investment Corporation and Hutchison Whampoa, AsiaSat is Asia's first regional satellite. Its coverage area embraces 2bn people, or about half of the world's population, and use of its circuits is reported to be heavy. Other satellite operators, including PanAmSat, are believed to be planning regional Asian systems.

Augmenting such initiatives is an expanding web of subsea fibre optic links. These originally emphasised the US-Japanese orientation of regional commerce but systems have recently begun to reflect some modification in the balance of local interests.

Short and medium distance fibre cables linking the Association of South East Asian Nations (Asean) community and its neighbours are proliferating. Long haul systems are planned to link Australia and New Zealand to Japan and California.

The most recently announced Asian fibre optic cable will be owned by some 38 carriers and link Singapore with Japan, via Malaysia, Hong Kong and Taiwan. The 7,500km APC system will be the longest in the Pacific region and, depending on the particular segment, will have two or three pairs of fibres. Each pair will carry more than 30,000 simultaneous telephone calls. APC, in which Singapore Telecom is the largest investor, will enter service in 1993.

In parallel with the build-up of Pacific Basin telecommunications infrastructures, local manufacture of hardware is becoming more important. Until recently, this field was dominated by Japan and the four "dragons" of Hong Kong, Singapore, South Korea and Taiwan. Now countries such as Australia and China are getting in on the act.

Australian technology is becoming the worldwide standard for very high capacity, metropolitan area networks. China is concentrating on expanding its domestic telephone network, but the Shanghai Bell Telephone Equipment Manufacturing Company, a joint venture with the Alcatel group, has exported locally-produced digital telephone exchanges to the USSR.

The author is International Editor, Telephony Magazine.

NEW ZEALAND

From monopoly to competitor

IN little more than three years, New Zealand's telecommunications industry has undergone considerable structural change. From a protected government department which was designed to operate as a monopoly to create jobs and for related social reasons, the industry now operates in a largely unregulated and competitive environment.

Telecom, the former government department, still dominates the industry. But it has an aggressive competitor, Clear Communications, which provides a cheaper telephone service over 80 per cent of the country.

Next year, Bell South Corporation of the US will launch an alternative cellular network. Hundreds of smaller companies and individuals also provide competitive services.

Until 1987, virtually all telecommunications services were provided by the Post Office which had a statutory monopoly for domestic and international services. The reformist Labour government split the Post Office into three sections – Telecom, New Zealand Post and Postbank – which were to be privatised. Only New Zealand Post has yet to be sold to the private sector.

To allay public concerns, the government kept one preference share, the so-called 'Kiwi share'. This requires the company to observe certain principles, such as maintaining a local free calling option for residential customers (although this can be waived if Telecom's profitability might be affected).

As a state-owned corporation, Telecom was allowed to borrow as much as it wanted to modernise services and hire the best available international talent.

Under a former senior British Telecom official, Dr Peter Troughton, and others hired from Britain and the US, the organisation underwent a massive shake-up, helped by legislative changes and union agreements which facilitated a massive reduction of staff. Between April 1, 1987 and March 31, 1991, staff levels fell from 24,500 to 14,900; hundreds more have been laid off in recent months.

Dr Troughton began a sweeping programme to upgrade Telecom's services to prepare for deregulation and eventual competition. The plan was designed to increase service quality, network reliability, personnel productivity and profitability. The modernisation and capital expenditure programme, launched in 1987, saw the investment of more than NZ$2.5bn ($1.46bn). The plant replacement programme brought international attention and was instrumental in attracting Ameritech of the US, which became an important supplier of new equipment. Last year Ameritech led the consortium with Bell Atlantic to buy Telecom for NZ$4.25bn.

Telecom management claims it operates one of the world's most advanced telecommunications transmission and digital switched networks. It has largely completed its capital replacement programme. Half of its exchanges are less than three years old and 87 per cent of its access lines are linked to digital exchanges.

To increase efficiency, a holding company structure was introduced which reduced central management, decentralised decision making and made each regional business directly accountable for customer satisfaction and financial performance.

Telecom is in the throes of a major tariff rebalancing programme to reduce cross subsidies among services and to establish prices which more accurately reflect underlying costs. This has already seen major changes in the company's revenue flows. It has substantially reduced national toll call charges, lifted domestic rates and introduced a range of off-peak prices to stimulate demand. The aim is to put the company in a better position to respond to competition and identify opportunities for future capital spending. The programme has led to a steady rise in domestic charges, and a drop in toll and business telephone charges.

Substantial sums are being spent on providing value-added services such as cellular telephones and promoting the 18 regional Yellow Page directories, while operating costs are falling as a percentage of total revenues through increased network modernisation and staff cuts.

In July, Ameritech and Bell Atlantic, under the terms of their purchase agreement with the government to reduce their shareholding to 49.9 per cent, sold 27 per cent of their shares on the New York, London and Asian exchanges in what has been described as the most successful float on Wall Street this year. The shares went to a 25 per cent premium. The remaining shares will be sold within two years.

From the outset, government policy was designed to ensure competition. Last year Clear Communications began a full service using Telecom's network. This followed a protracted court hearing in which Clear alleged Telecom was delaying making its network available for competitive reasons.

Clear is owned by the New Zealand-based Todd Corporation, Television New Zealand, MCI Communications of the USand Bell Canada Enterprises. The company was formed to use fibre optic cables owned by New Zealand Railways, which retains options to buy shares. Further services are carried by the new Cook Strait cable link between the North and South Islands, using an optic cable installed as part of the Electricity Corporation's Transpower network upgrading.

In August, Clear announced that it had 10,000 customers. It offers what it says is a cheaper service for residential and business customers, and has one of the world's more modern networks with all-digital transmission and switching.

Also in August, Bell South announced that it had run into problems negotiating an interconnection agreement with Telecom for its rival cellular network, but expects this to begin operating in January next year. The American-owned company, which secured a TAC A frequency last year for NZ$25m, has been negotiating with Telecom for almost a year. Bell South plans to invest NZ$150m in its network over the next 10 years.

A further competitor is Aussat, the telecommunications satellite operator owned by the Australian Government. Aussat offers Auckland and Wellington subscribers a private network between Australia and New Zealand and plans to begin international telephone services calls on a trial basis this year.

Ameritech and Bell Atlantic, Telecom's major shareholders, have announced that, together in partnership with Hutchinson Whampoa, they may bid for Aussat. Telecom is advising the consortium on the Australian Government's plan to create a second network operator in Australian through the sale of Aussat although consortium spokesmen in New Zealand say this will be managed from Australia. Bell Atlantic also heads a consortium, this time including Telecom, for the rights to design and maintain a second network in New South Wales.

Telecom has made little secret of its desire to expand outside its home base – but this would have to be agreed with its majority US owners, who spoke last month of their desire to keep as much independence as possible between their New Zealand and possible Australian involvements.

Terry Hall

AUSTRALIA

Compromise over reforms

AUSTRALIA'S telecommunications industry is in the initial stages of a series of regulatory changes which will introduce open competition in all services by 1997.

The changes follow increasing dissatisfaction with the existing system, under which traffic is split between two government-owned corporations – Australia Telecom, which handles domestic calls, and OTC, which handles international traffic.

The Labor government is also anxious to dispose of the loss-making Aussat satellite operator, which was launched as a space-based competitor to Telecom, but failed because of inadequate funding and regulatory restrictions.

However, reform of the telecommunications industry has been difficult for Labor because of strong opposition in the trade unions and the left to any reduction in government ownership.

As a result, initial moves to privatise either Telecom or OTC had to be dropped in favour of a compromise under which Aussat is being privatised as the basis of a private sector second carrier.

Telecom and OTC are to be merged, but will remain in government ownership. A government regulatory agency, known as Austel, has been established to supervise competition between the carriers, and the transition to full competition.

The government hopes the duopoly will begin in January, following the sale of Aussat at the end of the year. It is intended to last until 1997, giving the second carrier five years to establish a significant market share before the introduction of open competition.

Mr Kim Beazley, the communications minister, successfully piloted the necessary legislation through the federal parliament earlier this year, but the government's compromise proposals have pleased few in the industry.

The merger of Telecom and OTC creates a strong government-owned carrier which will be able to hold its own against private sector competition, but has done nothing to ease trade union fears that efficiency pressures could cost up to 16,000 public sector jobs.

At the same time, the decision to base the second carrier on Aussat leaves ATUG, the Australian Telecommunications Users' Group, unconvinced that Telecom/OTC will face a serious battle for customers.

"We did not want an amalgamation of OTC and Telecom, and we do not see the duopoly as an ideal way to go," says Mr Allan Robertson, a senior ATUG executive. "We have serious doubts about whether real competition is going to be achieved, but we accept the duopoly as an act of political pragmatism because of the forces that were being mobilised in the Labor Party and the trade unions," he says.

Initial hopes of a bidding race for Aussat dissipated when the giants of the industry – AT&T of the US, NTT of Japan and British Telecom failed to register an interest, perhaps in the hope that the opposition Liberals will go ahead with plans to privatise Telecom if they win the next election, due by 1993.

The front-runner is Optus Communications, formed by Bellsouth of the US and Cable & Wireless of the UK, each holding 24.5 per cent, and Mayne Nickless, an Australian transport group, with 20 per cent.

Optus is backed by the AMP Society and National Mutual Life, Australia's two biggest financial institutions, and the AIDC Telecommunications Fund, and has the political advantage of being 51 per cent Australian-owned.

The other bidder is Kalori Communications, which comprises three overseas companies – Hutchison Whampoa of Hong Kong, and Bell Atlantic and Ameritech of the US, both of which are also investors in recently privatised New Zealand Telecom.

Kalori has no domestic investors, but has agreed to abide by government demands that 51 per cent of the successful consortium must be Australian-owned within five years.

Comsat, the US satellite operator, also registered an interest in Aussat, but has since said it is seeking to interest one of the other consortia in its satellite technology, which it claims could extend the life of Aussat's dying first-generation satellites, postponing the need for heavy investment in second generation equipment.

Mr Beazley is expected to announce the winning bid for Aussat this month, in time for the sale to be completed before the new year. However, Kalori is understood to have told the government it was still unsure whether to table a final bid.

Optus has been more positive, promising to spend A$4bn (US$3bn) over five years to provide competitive long-distance and international access to all Australians, and a digital cellular service to 80 per cent of the population.

The consortium says it will achieve a 21 per cent share of the domestic and long-distance market for residential and small business customers by 1997, and more than 30 per cent of the cellular market.

Such an outcome would satisfy critics who claim Telecom/OTC is likely to prove too big for effective competition. But some observers doubt that Optus would be willing to invest on the scale it promises.

Dr Sam Paltridge, a research fellow at the Centre for International Research on Communication and Information Technologies in Melbourne, says the Optus group's proposed investment looks excessive compared to the track record of new entrants overseas, such as Mercury in the UK and MCI in the US.

His research shows that Optus's planned investment is more than three times the amount Mercury spent over the same period in attempting to penetrate a market more than three times as big as Australia. Put another way, Optus's proposed spending equates to around 50 per cent of Australia Telecom's present level of investment. In its first five years, Mercury spent 8.7 per cent of British Telecom's expenditure.

Dr Paltridge says Optus is also likely to be discouraged from investing in new equipment by a relatively cheap interconnection charge for the use of the Telecom/OTC network of 3.14 cents a minute on average, half the level imposed on Mercury and MCI.

"I would be very sceptical about the (Optus) figures," says Dr Paltridge. "If they really are going to invest this amount of money that is all well and good, but you are only handing out these licences once, and the government really needs to be careful about it."

However, the government's first priority is to achieve a successful sale of Aussat, followed by the capture of a significant share of the market by the second carrier. Estimates of the sale price vary between A$400m and A$800m, but the withdrawal of Kalori would leave Optus in a very strong position.

Kevin Brown

JAPAN: International Services

Big six houses branch out

JAPAN'S large trading companies are forcing an entrance to the international telecommunications service sector, providing lower rates for individual and corporate customers.

The "big six" houses have established large equity stakes in the two new *international* common carriers which compete with the established Kokusai Denshin Denwa (KDD). Profits, however, are declining because of price-cutting competition.

That is encouraging three international players to diversify their services in quest of profits. Competition is shifting from rate-cutting to a trend focused on more sophisticated services for business customers.

Under pressure from the two newcomers, KDD recently matched their lower rates. Until 1989, it monopolised access to Japan's international *telecommunications* circuits. People in Japan making international calls now can choose between the two newcomers and KDD. They are International Telecom Japan (ITJ) and International Digital Commu*nications (IDC)*.

IDC's owners include the large trading company C. Itoh, the UK's Cable and Wireless, Toyota Motor and Pacific Telesis International of the US. Three large traders – Mitsubi*shi, Mitsui* and Sumitomo – together with electronics maker Matsushita Electric Industrial are the main shareholders of ITJ. Other signifi*cant shareholders of ITJ the* last two of the big six trading companies – Marubeni and Nissho Iwai.

Financial institutions are well represented as shareholders of the new carriers. For example, six of Japan's city banks – including Mitsui Taiyo Kobe Bank, Mitsubishi Bank, Fuji Bank and Bank of Tokyo – are minor shareholders of ITJ, as well as major lenders to the company.

In the nearly two years since the start of the new carriers' public services in October 1989, the approach has focused on KDD responding to the lowering of rates by the two competitors. When competition started, the two newcomers offered rates on calls to the US 23 per cent less than those of KDD. Under such pressure, KDD has cut its rates four times.

The two-year period during which ITJ and IDC offered lower rates was all but orchestrated, says an official at the Ministry of Posts and Telecommunications. The idea was to enable the new companies to get off to a smooth start. *Rate* reductions have had a severe impact on KDD, which was accustomed to an easy life.

In the year ended March 31, *1991, KDD's pretax operating* income fell 23.3 per cent to Y24.4bn ($183m), and revenues were down 7.0 per cent to Y240.7 bn. Lowering of rates prompted KDD to cut research and development spending by 9.4 per cent, an unusual move by a Japanese company.

KDD is trying to make it as easy as possible for customers to pay bills. Customers in the Tokyo area as from August have been receiving bills that include bar codes that can be read by terminals at convenience stores run by Seven-Eleven Japan and other companies.

KDD is focusing on its ver*sions of integrated services dig*ital network (ISDN), which it started offering in Tokyo two years ago. Its ISDN services rely on links with AT&T and BT (formerly British Telecom).

KDD officials say its ISDN services *allow* customers access to high-speed lines in such formats as standard phone, facsimile, image and data communications. By the *end of the decade, KDD expects* its ISDN services to account for 10 per cent of revenues.

Diversification of services and the overall movement toward high-value-added services is the challenge that confronts KDD. As the company has only faced competition for two years, it is still reluctant to jump into new fields, but it is taking steps.

KDD says that it is cutting *charges for international tele*conferencing services and that it will soon offer transmission of high-definition television (HDTV) signals. The goal is to commit users to broadband services, while reducing costs and offering viable charges.

For Japan's international carriers, the age in which competition was largely a matter confined to national boundaries is over

To offer better ISDN services, KDD is researching satellite and optical communications systems, multi-media communications services, network design, and artificial *intelligence (AI)* software. For example, by pursuing advances in "intelligent image coding", KDD is attempting to reduce the amount of video informa*tion that must be transmitted.*

For Japan's international telecommunications carriers, the age in which competition was largely a matter confined to national boundaries is over. A year ago, a typical KDD executive would have named IDC and ITJ as principal competitors. In the mid-1990s, he would probably name AT&T, BT, Cable & Wireless, and Singapore Telecom.

Nippon Telegraph and Telephone (NTT), which owns 10 per cent of KDD, is getting overseas business, mainly through subsidiaries such as NTT Data Communications Systems. To keep its interests spread widely *KDD* is teaming with more Japanese and overseas companies.

The pattern is that Japanese partners enable KDD to gain access to innovative hardware, like the joint marketing with Sharp of a colour facsimile machine featuring ISDN compatibility, while international team mates are attractive on the basis of promising ideas. KDD has agreed tentatively to co-operate with Motorola in the *so-called Iridium* project, consisting of 77 small satellites in low orbits.

It will enable users to gain access to each other and major telecommunications networks via the planned satellite system from hand-held telephones anywhere in the world. It remains uncertain whether the $2bn plus Iridium project will get off the ground. However, KDD needs to hedge its bets to keep from being left out of *important projects* on the global horizon.

For ITJ and IDC, strategies revolve around increasing the number of countries served, from about 30 to 45-50 by the spring of 1993. They probably will not need to expand beyond that range, because approximately 98 per cent of all calls from Japan go to 50 nations.

KDD retains many advantages over its rivals. For exam*ple, it is Japan's signatory to* the Washington-based International Telecommunications Satellite Organisation (Intelsat). Moreover, KDD is a part owner of Telecommunications Satellite Corporation of Japan (TSCJ), which operates domestic communications and broadcasting satellites. It is the only one of the trio to possess an R&D infrastructure that was built during the time of a monopoly on services.

Japan's trading companies do not count on making large, quick profits from their equity positions in the new international carriers. But such positions should enable them to expand their telecommunications business operations and the scope of their value-added services in the years to come.

Neil W. Davis

JAPAN: Domestic market

Goliath gnawed by rivals

JAPAN'S mammoth *Nippon* Telegraph and Telephone Corp (NTT) has come under increasingly fierce competition and earnings pressure in the six years since losing its domestic telecoms monopoly. In the fiscal year through March, rivals snatched from NTT 14.5 per cent of the $12.35bn long-distance call market; 10.8 per cent of the $3.23bn leased circuit market; 27.5 per cent of the $1.93bn car and portable phone market; and 27.9 per cent of the $902m pager market, according to Toyo Keizai, an economic news organisation.

Type 1 operators - or new common carriers (NCCs) - are facility-based firms supplying regional, long-distance satellite, international and mobile telephone services and dedicated circuits. Type 2 carriers resell specialised services, including electronic mail, packet switching and dedicated circuits.

For NTT, the most painful loss is to the four leading long-distance carriers – Daini-Denden Inc, Japan Telecom, *Teleway Japan* and capital-area operator Tokyo Telecommunications Network (TTNet) – which launched operations in 1987 using NTT access circuits and their own fibre-optic and microwave networks.

On some heavily used routes, including those linking business centres in Tokyo and Osaka, the NCCs have captured as much as half the traffic by offering distinct cost advantages. The battle over cellular phone service is already furious (see related story), and smaller rivals are beginning to challenge NTT in the emerging market for integrated services digital networks (ISDN), which allow simultaneous, high-speed transmission of voice, fax, data and image information.

So far, plans to popularise broadband-ISDN by the end of the century are running behind schedule due to prohibitive start-up and equipment costs and cultural resistance in Japan's notoriously inefficient offices.

Mr Waldie Thiessen, senior telecoms analyst at Credit Lyonnaise Securities in Tokyo, predicts the market will reach the take-off stage in one-to-two years when equipment prices drop.

Markets for related products are growing as well, including local area network (LAN) and packet switching services. NEC Corp. and Intec Inc. both announced early this year their plans to sell packet *switching via NTT lines*. Some 40 per cent of firms listed on the Tokyo Stock Exchange first *section already operate private* communications networks via NTT digital circuits. The focus will now shift to smaller firms.

In the skies overhead, two satellite communications firms, Japan Communications Satellite Co. (JC-SAT) and Satellite Communications Corp (SCC), are to offer a domestic telecoms service. JC-SAT is owned by C. Itoh & Co, Mitsui and Hughes Communications Inc of the US and SCC by the *Mitsubishi* group. A third firm, Satellite Japan Corp, is controlled by Sumitomo, Nissho Iwai and Marubeni and will launch its first satellite in 1994, having obtained a licence from the Ministry of Posts and Telecommunications (MPT) this April, six years after its initial application. Trading houses were *able* to gain control of this glamour industry because of their deep pockets and extensive ties to aerospace firms through aircraft leasing and sales. As in the fast-growing $1bn US satellite communications industry, the largest potential market in the Y14bn Japanese market are cable network stations.

Large corporations are also interested in using the links to inform and educate workers at remote locations.

However, the industry's best-laid plans so far have crashed to earth. SCC's only satellite, Super Bird A, struck problems last December.

Japanese consumers have already received significant benefits through lower telephone user rates and enhanced services

This has left JC-SAT with Japan's only two operative commercial telecoms satellites. SCC has been servicing its 10 broadcast clients via transponders on its rival's satellite since Super Bird A's ran into difficulty at the end of last year but hopes to end the dependency by launching one of its own as early as next January.

Deregulation can take decades rather than years in an industry as complex and capital-intensive as telecoms, but Japanese consumers have already received significant benefits through lower telephone user rates and enhanced services, including value added networks (VAN), teleconferencing and computer data transmission.

Further liberalisation is not far off, according *to* an MPT 1991 white paper released in early June. The report notes that competition has lowered costs in recent years and seeks further cuts and expanded services. One of the earliest such moves will likely come in 1993 with easing of regulation of the mobile phone market.

By mid-decade a further review is scheduled into the operations of NTT and the question whether the industry superpower should be split into regional service providers, much as in the way that a *large part of AT&T's network* in the US was divided into the "Baby Bells".

NTT executives oppose such plans, preferring a single split into nationwide local and long-distance companies. This has put them at odds with MPT bureaucrats, but the recent decision to hive off NTT's mobile phone unit is viewed as an warning sign for those campaigning to keep the firm largely intact.

The imbroglio involving NTT shares, of which the government still holds about 66 per cent, has vastly complicated the issue and brought the mighty ministry of finance into the picture.

No matter how that drama unfolds, telecoms capital expenditure should remain *steady for some time to come,* although some slowing is likely now that the NCCs largely have their networks in place.

Between 1984-1990, domestic spending on telecoms equipment grew an average of 10.1 per cent annually, compared to a 4.7 per cent increase each year of overall gross national product as a whole.

Among electronic equipment makers, the main investment focus over the next couple of years will remain on semiconductors rather than telecoms, says Mr Shigeru Yoshinaka, an analyst at Barclays de Zoete Wedd Securities. In a few years he foresees solid sales growth potential for ISDN and personal computer communications equipment, especially if voice and image elements are incorporated.

The NTT industry goliath plans to raise capital investment 7.5 per cent in the current fiscal year ending next March to Y1,850bn. Its medium-term plan projects investment of Y8,800bn over a five-year period starting in April 1991 including an increase in annual R&D spending to Y300bn, or 5 per cent of operating revenues.

NTT also aims to boost the contribution to consolidated revenues of non-conventional services, including ISDN and mobile phone services, to 25 per cent by 1995 compared with 13 per cent in fiscal 1990. The setting of these objectives is hardly surprising given last year's 13.9 per cent drop in consolidated pre-tax profits and the expectations of a further declines this year.

Neil Weinburg

JAPAN: Mobile phones

Market blossoms in Japan

THE JAPANESE market for mobile phones has sprung to life in the past few years. It is now growing at a hectic pace that is expected to continue for many years to come.

The sudden turn to growth, after nearly a decade of stagnation under the monopoly of Nippon Telephone and Telegraph (NTT), is a direct result of competition. Rates have come down, service has improved, and new *entrants* are piling into the market, including motor manufacturers Nissan and Toyota and foreign operators such as British Telecom and Nynex. Motorola, the US electronics group, has a big share of *the equipment market.*

Japan was one of the first countries in the world to offer mobile phone services in 1979, but the market hardly developed until about 1988. Since then, subscriptions have roughly doubled each year and in July passed the million mark. But per thousand peoplethey are still below 10, compared with about 20 in the US and the UK, and 54 in Sweden. *NTT projects a period of strong* growth that will take the total to between 8m and 12m by the turn of the century.

NTT offers a nationwide analogue system based on its own standards. Currently, it faces one competitor offering services in each principal market: Nippon Idotsushin (IDO), whose shareholders include Nissan and Toyota, in the region surrounding Tokyo, and Daini Denden (DDI), owned *in* part by Sony and Kyocera, in Osaka and elsewhere. DDI uses Motorola's micro-Tac system. IDO began with NTT's system, although it will start offering *Motorola-standard* service in Tokyo this year, after political pressure from the US.

Because of the rapid rise in analogue subscriptions however, the system will soon reach the limits of capacity. As *a* result pressure is on to get a higher-capacity digital system up and running quickly.

NTT will provide a nationwide service and will start operations next year in the Tokyo region. The year after, it *will encounter* competition in digital service from IDO and DDI in the 800 MHz band. Moreover, the government has opened up a higher-frequency band (1.5 GHz) and licences are expected to awarded to two *newly-formed* companies: Tokyo Digital Phone (whose owners include JR East, Toyota and Pacific Telesis of the US), and Tsuka Cellular (owned by DDI, Nissan and Motorola, with smaller shares held by Nynex, *BT, GTE* and Roger Cantel).

The companies offering services in the higher wave bands are somewhat at a disadvantage since for technical reasons they must install four times as many transmitters to provide the same coverage. But expectations of growth and profits have been enough to overcome any doubts.

The final result, as analogue services are eventually phased out, will be four operators in each area offering digital services, which could make Japan the most competitive market in the world. Although NTT offi*cials acknowledge that* competition will bring benefits, they say that having four operators leads to a wasteful excess of capital investment.

Under pressure from the Ministry of Posts and Telecommunications, and over the objections of some directors, NTT has agreed to spin off its mobile phone services into a separate company that will eventually be listed on the stock exchange – partially or completely divested. The aim is to separate the mobile phone business from the local telephone service monopoly which NTT continues to provide and thereby reduce government regulation.

Mr Ryoichi Tanaka, executive manager of planning for NTT's mobile communication sector, points out other benefits: the cellular service will no longer be overshadowed by NTT's mainstream business and can set its own investment budget. The company will be free from requirements to make public the results of its research activities. It will also be free from provisions of the laws *governing NTT and giv*ing priority to company's obligations to provide service for the public over and above making a profit.

As a result of the competition, NTT's domination of the market has been steadily eroded. Of the 378,520 new subscribers in the year to the end of March, 55 per cent went to NTT's competitors. IDO and DDI now claim about 37 per cent of the *market.*

NTT has had to fight back by both lowering rates and improving service. The basic monthly service fee has dropped from Y30,000 ($225) in 1985, to a recently proposed Y17,000. However, other carriers will shortly be offering fees of Y12,000, which is likely to herald another round of rate cutting next year. Call charges have been similarly slashed.

Not only did the competition move ahead by offering cheaper service originally, but DDI also had the advantage of using Motorola's micro-Tac terminal, then the smallest and lightest in the world. NTT has responded with its Nova system, for which it now makes similar claims. Its rented equipment has descended in two stages from a cumbrous portable phone in 1987, weigh*ing 750g and taking up 500cc,* to the latest pocket phones that weight 230g and take up just 150cc.

So far equipment has been available to the public only through renting equipment from the company providing mobile phone service. That should change next year when purchases will become possible. The type and variety available should mushroom as Japanese companies concentrate on what they do best: making small, practical electrical appliances.

NTT is also planning to introduce a micro-cellular system – tiny, high frequency *(2-3 Ghz) pocket phones that* tap directly into the normal phone circuit by means of receiving stations that cover an area 100 meters in diameter. The telephones will not work properly in a moving vehicle, but could be ideal for densely settled areas like Tokyo and Osaka. Transmitting stations could also be installed in trains or airplanes.

As yet it has not yet been decided whether this service will stay with the parent company NTT, or will go to NTT Cellular.

Steven Butler

Middle East

ISRAEL

Reforms are piecemeal

THE twin forces of privatisation and competition are slowly but relentlessly chipping away at Israel's state-owned telecommunications monopoly, Bezek. Two offerings of shares in the company have put a large chunk of the company into the public's hands, *and a third offering* is now on the drawing board.

Meanwhile, a government white paper released last spring has recommended opening important parts of the Israeli telecommunications market to at least limited competition.

Neither development promises to put Israel in the forefront of telecommunication deregulation. The government has so far refused to surrender its controlling stake in Bezek nor does the white paper, popularly known as the Boaz commission report, propose opening basic telecommunications services to competition. Nevertheless, Israel has made great strides in deregulating and improving service over the past decade. If phone and data communications services are not quite up to western standards, they represent an enormous improvement over the pre-Bezek days.

Until 1984, when Bezek began operations, phone service was run directly by the Ministry of Communications – a ponderous bureaucracy that operated under enormous political pressures. The most popular complaint then was about the time it took to get a telephone installed: in a country of around 4m people, 256,000 were waiting for phones, two thirds of them for more than a year in 1984.

The long wait was symptomatic of much deeper problems. The entire phone system was primitive by western standards and was far from capable of meeting the vast new demands of a computerised society for telecommunications.

Today, in its seventh year of operations, Bezek likes to point out that the waiting list has been cut to 43,000 (of whom only 7,900 have been waiting more than a year), even though Israel's population has grown quickly.

But the shorter waiting list is as much indicative of Bezek's failure as of its success. It remains bureaucratic and largely removed from market considerations. Since its founding, top priority has been given to the politically sensitive issue of installing new *phones. Thus,* only 48 per cent of Bezek's telephone exchange's are digital – a big improvement over nil six years ago, but well behind western standards.

Transmission is often poor. Bezek's "privatisation" has been much ballyhooed in the press and the financial markets but, unless the government opts for giving up actual control, there is little promise for fundamental changes in the company. The government sold off 6 per cent of Bezek on the Tel Aviv Stock Exchange (TASE) in September 1990 for about $75m and another 9 per cent for a relatively cheap $87m (which will ultimately bring the public's stake in Bezek to 25 per cent, if shareholders exercise all the options to buy shares that came with the second offering).

The government is now readying a two-part sale of shares, this time to overseas interests. The plan is to sell 9 per cent to foreign institutional investors via private placements and 14 per cent to a "strategic" investor, ie, a for*eign telecommunications* company that can lend Bezek its expertise.

Rumors are that such blue chips as AT&T, MCI and Southwestern Bell have expressed an interest in the strategic stake. *The TASE* offerings met with huge demand, but that was less a reflection of the market's evaluation of the company itself than of the large amounts of money that institutional investors are now free to put in equities because of recent reforms in the capital market.

Bezek boosted its first-half 1991 earnings to about $50m, two-and-a-half times its year-earlier level, on income of $750m, a 16 per cent gain. But Bezek's return on equity was a

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INDIA

A tangled network

THE future of the Indian telecom industry has been rendered uncertain by the recent change of government in New Delhi.

When Prime Minister P.V. Narasimha Rao's Congress administration took power in June, the government was committed to a policy of deregulation. In his first public statements, Mr Rajnesh Pilot, the new Minister of Communications, said that a number of value added services – electronic mail, video-conferencing, and telex – would be thrown open to the private sector.

The private sector, he said, would also be allowed to build, install and operate private networks. The networks would be based on standardised equipment supplied by the Department of Telecommunications.

Mr Pilot seemed by his remarks to exclude the possibility of the market for main exchange switching equipment being opened to further competition. In a tussle between government departments, however, the ministry of industry said that the main exchange switching equipment market should be deregulated as well.

At the moment, the only two main exchange technologies licensed by the Indian government are Alcatel's E10B and the indigenous C-Dot technology developed by Mr Sam Pitroda.

Mr Pitroda, an Indian-born electronics engineer who made a business career in the US, has determined Indian government telecom policy in recent years as a confidant of former Prime Minister Rajiv Gandhi and as chairman of the Telecom Commission.

C-Dot developed and brought into production a modular switching system for office and rural exchanges. It has encountered problems in developing a 16,000 line exchange. Its smaller 10,000-line main exchange is undergoing field trials.

Mr Pitroda has refused to allow other multinationals to compete in main exchange switching equipment, on the grounds that the C-Dot technology would save India foreign exchange and that it was adequate for India's needs.

Mr Pitroda, however, seems likely to be replaced as head of the telecom department, opening the door to other multinationals apart from Alcatel. Amongst those interested in the switching market and services are most of the large international telecom companies, from AT&T to Siemens, Ericsson and NEC.

India is potentially a vast market for telecommunications equipment because of the size of the country and as the existing network is underdeveloped. India's current five-year plan allocates spending of $12bn on telecommunications in the period 1990-95 and $27bn in the five years after that. Those figures grossly underestimate the expenditure required if funds were not a constraint.

The registered waiting list of people seeking phone connections is 1.7m. In spite of growing investments, the gap between the demand for lines and the capacity to install them is at present 300,000 to 400,000 a year. The gap is widening.

The government is likely to retain its monopoly over telephone services because it needs the substantial revenues it raises from charges in big cities to finance expansion in the rural areas

Digital switching systems and the use of optical fibre cables, however, have been increasing the number of calls that are successfully completed. In Delhi and Bombay, the rate has risen from 30 per cent to more than 80 per cent in the last five years.

The government maintains a monopoly over the operation of telephone services and hence over the purchasing of main switches. The government is likely to retain that, because it needs the substantial revenues from telephone charges in big cities to finance expansion in the rural areas.

Alcatel's E10B technology is being manufactured under licence by the state-owned Indian Telephone Industries (ITI) at its plant at Mankapur, north India. Alcatel has been in discussions with the government about updating this technology and going into partnership with an Indian private sector group.

The door has been closed to further international telecommunications companies competing in this market by Mr Pitroda's insistence that C-Dot could fill the remaining gap. The credibility of that claim has been questioned.

ITI itself says that it has developed its own modular switching system which will be ready for field trials this year. With 32,000 workers in six factories, it is heavily over-staffed.

It has suffered this year from components shortages as a result of the foreign exchange crisis stalling imports. At one point it seemed production might stop. It is now able to obtain foreign currency by purchasing it through the new eximscrip market at a premium, now about 40 per cent.

ITI remains the only manufacturer of main exchange switching equipment. Several private firms have been licensed to produce smaller exchanges. These include Escorts and the Tata group.

David Housego

Piecemeal reforms

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paltry 5 per cent – a big improvement over 1990's 2.3 per cent, but a fraction of that of its American counterparts.

The government has promised to adjust Bezek's rates to eventually give it a return on equity of 8.5 per cent but progress has been slow. In the first half of 1991, for instance, rates were raised 7 per cent above the routine inflation-linked rises. Unfortunately for shareholders, it is the government on whom investors will have to rely to improve Bezek's return. Although the public controls a large part of the company, it has no say in Bezek affairs.

No plans are afoot to change that, nor is the government prepared to sell more shares beyond the next round of sell-offs, which will still leave the state with 52 per cent holding.

Critics have gone as far as to say that the government simply looks at Bezek as a cash cow and that the company, in fact, is not being privatised.

If there is a cloud on Bezek's horizon, it is the prospect of competition. There are only a few areas in the telecommunications market where Bezek does not have a monopoly, and in those areas its record has been less than sterling.

Isranet, its packet-switched data network for commercial customers, had only 2,200 customers at the end of 1990 and has been growing slowly because, the company admits, big institutional customers have alternatives. The government has allowed private networks for some time and has licensed the Postal Authority and a state-owned data processing company, Malam, to operate their own commercial networks. Last January, Isranet was forced to cut rates by 30 per cent.

Bezek Zahav, an electronic mail and database service operated as a joint venture with a company called Aurec, is losing money. The market for interconnection equipment (telephones and PBXs) is also open to limited competition. The Boaz commission would like to see more – but not completely free – competition in these areas as well as in overseas communications and cellular telephones (both now Bezek monopolies), and to permit private internal voice networks.

Basic telephone service and the telecommunications infrastructure, however, would remain in Bezek's hands. The white paper is now being reviewed by the finance and communications ministers. Pressure on the government to raise more money through share sales could eventually loosen its grip on Bezek. Likewise, burgeoning telecommunications demand could, if not satisfactorily met by Bezek, force the company and the government to significantly widen the field for competition. In the meantime, investors and the telephone-using public will have to make-do with piecemeal reforms.

David Rosenberg

SOUTH AFRICA

Socio-economic division

Waiting list: 120,000 people in black areas need telephones

EARLIER this year there was considerable hullabaloo in the South African press about the government's restrictive attitude to the use of low-frequency cordless telephones. Much ink was also spilled on the prohibitively high cost of car-telephones. Less was heard about the millions of South Africans who lack access to any sort of telecommunications equipment.

In this regard, the telecommunications scene faithfully reflects the fundamental socio-economic cleavage in the country whereby a small portion of the population, with highly sophisticated needs, is found alongside the vast majority of people whose needs are much more basic, and often unsatisfied.

The local industry has to meet the needs of both these constituencies. Traditionally, the emphasis has fallen rather more on the needs of the first-world sector. It does not require much imagination to anticipate that under a post-apartheid government, the needs of the third-world sector will enjoy greater attention.

Indeed, Mr Danie du Toit, general manager of Telkom, the national telecommunications utility, says its goal is already to "provide every person in South Africa with some form of telephone service". At the moment, South Africa has about 5.4m telephones – 40 per cent of Africa's phones, but not enough to prevent an outstanding list of 120,000 people wanting phones in black areas. The network is in the process of being converted from analogue to digital. About 60 per cent of it is now digital.

Achieving Mr du Toit's aim poses enormous technological and financial challenges to the industry. The traditional method of placing underground copper cables would be too expensive, and there is also the problem of theft of cables. The industry therefore needs to look at the possible use of satellites, optical-fibres and/or cellular phones.

Some interesting innovations have already emerged in order to satisfy the needs of low-density communities. One such development is the Small Digital Exchange (SDE), developed by Siemens in Germany and further developed in Argentina and South Africa. It runs on solar power and can service a couple of hundred subscribers. Another is the Rurtel system, commissioned in September by Altech and Alcatel, which is a radio-based system that provides switching for up to 250 subscribers.

Allied to innovation will also have to be a sizeable capital commitment. This will require a reversal of the pattern of the past few years which saw telecommunications expenditure by the government stay virtually flat in nominal terms at R1.35bn ($470m) from 1985/6 to 1989/90 – a cut virtually of half in real terms. This policy shift dates back to an influential report done for the government on the Posts and Telecommunications service by the late Dr Wim de Villiers. He thought the service had overspent on infrastructure, basing his reasoning on a projected 4 per cent annual growth in telecommunications traffic.

Dr Bill Venter, executive chairman of Altron, the country's largest electronics and telecommunications group, says this was an underjudgement by a factor of 100 per cent. He says there has been a cutback in real spending in the telecommunications sector of 70 per cent in the past three years. "You cannot do that and not pay a price," he argues, the price coming in the form of backlogs in the provision of telephones and digital network lines. Dr Venter argues that it is difficult to understand the reduction of capital expenditure in this manner in the service that is the state's most profitable revenue earner. Telkom made a net income of R861m in the year to March 1990.

Dr Venter says this severe cutback in capital expenditure led to significant loss of jobs, sales and profits for companies heavily involved in the industry. This is evident from his own company Altech's modest profit growth from R77m in 1988 to R88m in 1991. Admittedly, the economy was also in recession for much of this period, but the average inflation rate over the period was about 15 per cent.

While Dr de Villiers may have got his sums wrong, there has been another more fundamental change at work which has brought the telecommunications and broader electronics industry to the crossroads. This is the decline of military and strategically based decision-making as the country has embarked on a political reform process. Two of the main pillars in the development of the local electronics industry were the needs of the country's defence establishment, and the strategic aim to achieve self-sufficiency in the provision of telecommunications infrastructure. This pre-dated the country's political isolation, but obviously received added impetus as the country became increasingly isolated.

Now that both of these pillars have been removed, the industry needs to re-orient itself. As Mr Geoff Hainebach, joint managing director of Siemens South Africa notes, there will be no shortage of opportunities arising from the shift in government focus towards providing infrastructure for the entire population of 36m people, rather than for the small white minority. It will just be a matter of time for the reorientation to take place.

The move away from strategic self-sufficiency, will also involve rationalisation in the industry. Dr Venter believes there is overcapacity in the industry, arguing that the country really only needs two suppliers. Currently, the three main suppliers are Siemens, Altech (which has an alliance with Alcatel) and Temsa, a local manufacturer owned jointly by GEC and Plessey. Market sources speculate that Temsa and Siemens may soon move closer together because they make the same product.

Two further stimuli for change in the industry are the commercialisation of Telkom, which will be separated from its loss-making postal service twin at the beginning of October, and deregulation in the industry. Mr du Toit says once commercialised, Telkom will become more of a client-driven business.

The greater change is likely to come from deregulation which will probably see companies being allowed to use Telkom communications facilities to provide customers with value-added services that can be "hung" on the main service, which is certain to stay the monopoly preserve of Telkom.

One factor which will impact on the pace of deregulation will be the existence of long-term supply contracts – a legacy of the need to offer enticements to companies to start local production – which can only be renegotiated from about 1994. The government has also still to show its hand on the question of whether it plans to appoint an ombudsman (à la Sir Bryan Carsberg in the UK) whose decisions will affect the pace of deregulation.

Philip Gawith